

CAPITAL STRUCTURE

Exhibit WEA-1

Page 1 of 1

1997 ACTUAL

Company	Based on Book Value			Based on Market Value		
	Debt	Common Equity	Other	Debt	Common Equity	Other
Aliant Communications In.	23.7%	75.1%	1.2%	7.2%	92.4%	0.4%
Alltel Corp.	45.8%	53.8%	0.4%	19.9%	79.9%	0.2%
Ameritech	35.7%	64.3%	0.0%	9.1%	90.9%	0.0%
Bell Atlantic	49.2%	47.4%	3.4%	15.6%	83.3%	1.1%
Bell South	31.9%	65.9%	2.2%	11.2%	88.0%	0.8%
Century Telephone Ent., Inc.	66.7%	33.0%	0.3%	46.1%	53.7%	0.2%
Cincinnati Bell Inc.	31.7%	68.3%	0.0%	6.0%	94.0%	0.0%
Frontier Corp.	49.0%	50.0%	1.0%	19.1%	80.6%	0.4%
GTE Corp.	58.5%	32.4%	9.1%	22.1%	74.5%	3.4%
SBC Communications	52.5%	43.2%	4.3%	14.9%	83.9%	1.2%
Southern New England Tel.	66.0%	34.0%	0.0%	26.2%	73.8%	0.0%
Telephone & Data Systems, Inc.	34.4%	53.5%	12.1%	27.7%	62.6%	9.7%
US West, Inc.	54.5%	45.5%	0.0%	18.7%	81.3%	0.0%
Average	46.1%	51.3%	2.6%	18.7%	79.9%	1.3%

VALUE LINE PROJECTED (2001-2003)

Company	Based on Book Value			Based on Market Value		
	Debt	Common Equity	Other	Debt	Common Equity	Other
Aliant Communications In.	25.0%	75.0%	0.0%	11.8%	88.2%	0.0%
Alltel Corp.	37.0%	62.5%	0.5%	14.7%	85.1%	0.2%
Ameritech	25.5%	73.4%	1.1%	10.2%	89.3%	0.4%
Bell Atlantic	17.5%	81.9%	0.6%	7.0%	92.8%	0.2%
Bell South	30.0%	70.0%	0.0%	12.0%	88.0%	0.0%
Century Telephone Ent., Inc.	50.0%	50.0%	0.0%	29.1%	70.9%	0.0%
Cincinnati Bell Inc.	33.0%	67.0%	0.0%	14.1%	85.9%	0.0%
Frontier Corp.	47.5%	51.5%	1.0%	16.9%	82.7%	0.4%
GTE Corp.	58.0%	42.0%	0.0%	25.5%	74.5%	0.0%
SBC Communications	40.5%	57.0%	2.5%	14.8%	84.2%	0.9%
Southern New England Tel.	48.0%	52.0%	0.0%	21.9%	78.1%	0.0%
Telephone & Data Systems, Inc.	36.0%	59.5%	4.5%	21.7%	75.6%	2.7%
US West Communications	51.0%	49.0%	0.0%	20.9%	79.1%	0.0%
Average	38.4%	60.8%	0.8%	17.0%	82.7%	0.4%

Source: The Value Line Investment Survey (October 9, 1998), Value Line Index to Stocks (January 9, 1998).

1997 ACTUAL

Company	Based on Book Value			Based on Market Value		
	Debt	Common Equity	Other	Debt	Common Equity	Other
Ameritech	35.7%	64.3%	0.0%	9.1%	90.9%	0.0%
Bell Atlantic	49.2%	47.4%	3.4%	15.6%	83.3%	1.1%
Bell South	31.9%	65.9%	2.2%	11.2%	88.0%	0.8%
SBC Communications	52.5%	43.2%	4.3%	14.9%	83.9%	1.2%
US West, Inc.	54.5%	45.5%	0.0%	18.7%	81.3%	0.0%
Average	44.8%	53.3%	2.0%	13.9%	85.5%	0.6%

VALUE LINE PROJECTED (2001-2003)

Company	Based on Book Value			Based on Market Value		
	Debt	Common Equity	Other	Debt	Common Equity	Other
Ameritech	25.5%	73.4%	1.1%	10.2%	89.3%	0.4%
Bell Atlantic	17.5%	81.9%	0.6%	7.0%	92.8%	0.2%
Bell South	30.0%	70.0%	0.0%	12.0%	88.0%	0.0%
SBC Communications	40.5%	57.0%	2.5%	14.8%	84.2%	0.9%
US West Communications	51.0%	49.0%	0.0%	20.9%	79.1%	0.0%
Average	32.9%	66.3%	0.8%	13.0%	86.7%	0.3%

Source: The Value Line Investment Survey (October 9, 1998), Value Line Index to Stocks (January 9, 1998).

EXPLANATION OF CAPITAL STRUCTURE CALCULATIONS

I. Book Value

Book value capital structures for 1997 and projected 2001-2003 were based directly on the debt and common equity ratios reported by The Value Line Investment Survey (Value Line) (October 9, 1998), for the respective periods. The proportion of other capital was calculated as the difference between total capital (100 percent) and the sum of the debt and common equity ratios.

II. Market Value

For year-end 1997, the market value of each firm's common equity was calculated by multiplying the stock price at December 30, 1997, reported in Value Line's Index to Stocks (January 9, 1998), by the number of shares outstanding in 1997, also from Value Line. For purposes of this analysis, the market value of debt and other capital was approximated by its book value, calculated as the product of the year-end 1997 debt and other capitalization ratios discussed in I, above, and each firm's total capitalization, as reported by Value Line.

For 2001-2003, the market value of each firm's common equity was calculated by multiplying the average of Value line's "High" and "Low" stock price projections for 2001-2003 by the projected number of shares outstanding in 2001-2003, also from the October 9, 1998 edition of Value Line. Again, the market value of debt and other capital was approximated by its book value, calculated as the product of the debt and other capitalization ratios for 2001-2003 discussed in I, above, and the total 2001-2003 capitalization projected by Value Line for each firm.

1997 ACTUAL

	(a)	(b)	(c)	(d)	(e)	(f)
Company	Price	No. Shares	Market Value Common Equity	Total Book Capital	Debt	Other
Aliant Communications Inc.	\$33.00	36.58	\$1,207	\$397.0	\$94.1	\$4.8
Alltel Corp.	\$41.00	183.67	\$7,530	\$4,088.3	\$1,872.4	\$16.4
Ameritech	\$42.00	1100.70	\$46,229	\$12,918.0	\$4,611.7	\$0.0
Bell Atlantic	\$45.50	1553.00	\$70,662	\$26,966.0	\$13,267.3	\$916.8
Bell South	\$58.00	992.00	\$57,536	\$23,017.0	\$7,342.4	\$506.4
Century Telephone Ent., Inc	\$33.33	91.10	\$3,037	\$3,909.8	\$2,607.8	\$11.7
Cincinnati Bell Inc.	\$31.00	136.10	\$4,219	\$848.9	\$269.1	\$0.0
Frontier Corp.	\$24.00	164.10	\$3,938	\$1,900.8	\$931.4	\$19.0
GTE Corp.	\$51.00	958.00	\$48,858	\$24,785.0	\$14,499.2	\$2,255.4
SBC Communications	\$37.00	1837.30	\$67,980	\$22,911.0	\$12,028.3	\$985.2
Southern New England Tel.	\$49.00	66.67	\$3,267	\$1,754.1	\$1,157.7	\$0.0
Telephone & Data Systems,	\$47.00	60.87	\$2,861	\$3,680.1	\$1,266.0	\$445.3
US West, Inc.	\$45.00	485.06	\$21,828	\$9,219.0	\$5,024.4	\$0.0

(a) Price at December 30, 1997 from The Value Line Investment Survey, Index to Stocks (January 9, 1998).

(b) The Value Line Investment Survey (October 9, 1998).

(c) Product of (a) and (b).

(d) The Value Line Investment Survey (October 9, 1998).

(e) 1997 Debt ratio from The Value Line Investment Survey (October 9, 1998) times (d).

(f) Ratio of Other capital, calculated based on data from The Value Line Investment Survey (October 9, 1998), times (d).

VALUE LINE PROJECTED (2001-2003)

	(a)	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Projected Price			No.	Mkt	Total		
Company	High	Low	Avg	Shares	Value Equity	Book Capital	Debt	Other
Aliant Communications Inc.	\$40.00	\$25.00	\$32.50	36.0	\$1,170.0	\$625.0	\$156.3	\$0.0
Alltel Corp.	\$75.00	\$55.00	\$65.00	275.5	\$17,907.5	\$8,390.0	\$3,104.3	\$42.0
Ameritech	\$55.00	\$40.00	\$47.50	1,050.0	\$49,875.0	\$22,415.0	\$5,715.8	\$246.6
Bell Atlantic	\$55.00	\$45.00	\$50.00	1,562.0	\$78,100.0	\$33,435.0	\$5,851.1	\$200.6
Bell South	\$100.00	\$75.00	\$87.50	976.5	\$85,443.8	\$38,960.0	\$11,688.0	\$0.0
Century Telephone Ent., Inc	\$80.00	\$55.00	\$67.50	93.5	\$6,311.3	\$5,170.0	\$2,585.0	\$0.0
Cincinnati Bell Inc.	\$55.00	\$35.00	\$45.00	140.0	\$6,300.0	\$3,130.0	\$1,032.9	\$0.0
Frontier Corp.	\$45.00	\$30.00	\$37.50	172.8	\$6,478.1	\$2,795.0	\$1,327.6	\$28.0
GTE Corp.	\$85.00	\$65.00	\$75.00	950.0	\$71,250.0	\$42,060.0	\$24,394.8	\$0.0
SBC Communications	\$60.00	\$45.00	\$52.50	1,840.0	\$96,600.0	\$42,000.0	\$17,010.0	\$1,050.0
Southern New England Tel.	\$70.00	\$50.00	\$60.00	68.5	\$4,110.0	\$2,400.0	\$1,152.0	\$0.0
Telephone & Data Systems,	\$80.00	\$55.00	\$67.50	67.5	\$4,556.3	\$3,625.0	\$1,305.0	\$163.1
US West, Inc.	\$65.00	\$50.00	\$57.50	508.0	\$29,210.0	\$15,150.0	\$7,726.5	\$0.0

(a) Price at 2001-2003 from The Value Line Investment Survey (October 9, 1998).

(b) Average of Low and High projected stock prices for 2001-2003.

(e) The Value Line Investment Survey (October 9, 1998).

(d) Product of (b) and (c).

(e) The Value Line Investment Survey (October 9, 1998).

(f) Debt ratio for 2001-2003 from The Value Line Investment Survey (October 9, 1998) times (e).

(g) Ratio of Other capital, calculated based on data for 2001-2003 from The Value Line Investment Survey (October 9, 1998), times (d).



United States
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Service

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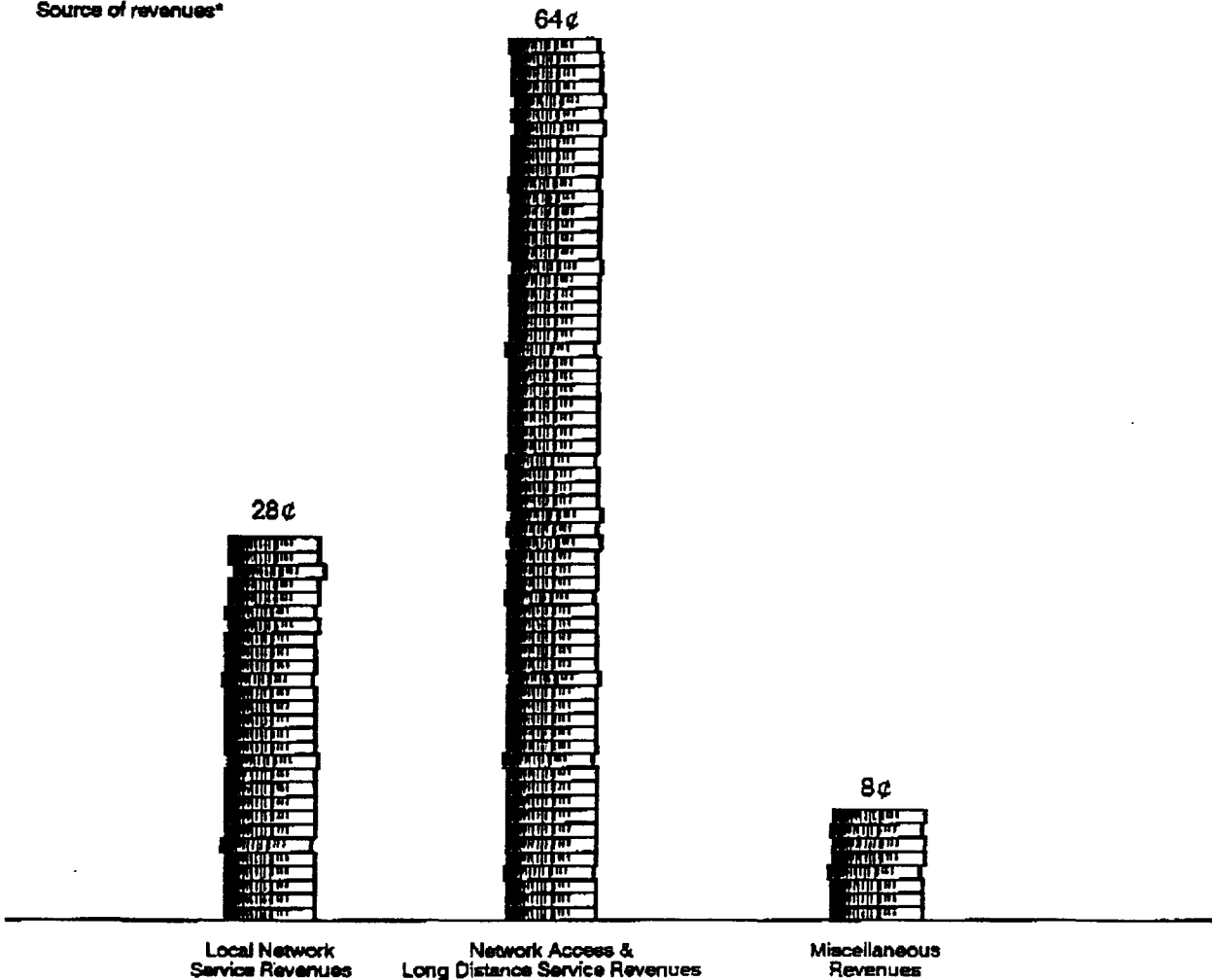
1997 Statistical Report Rural Telecommunications Borrowers



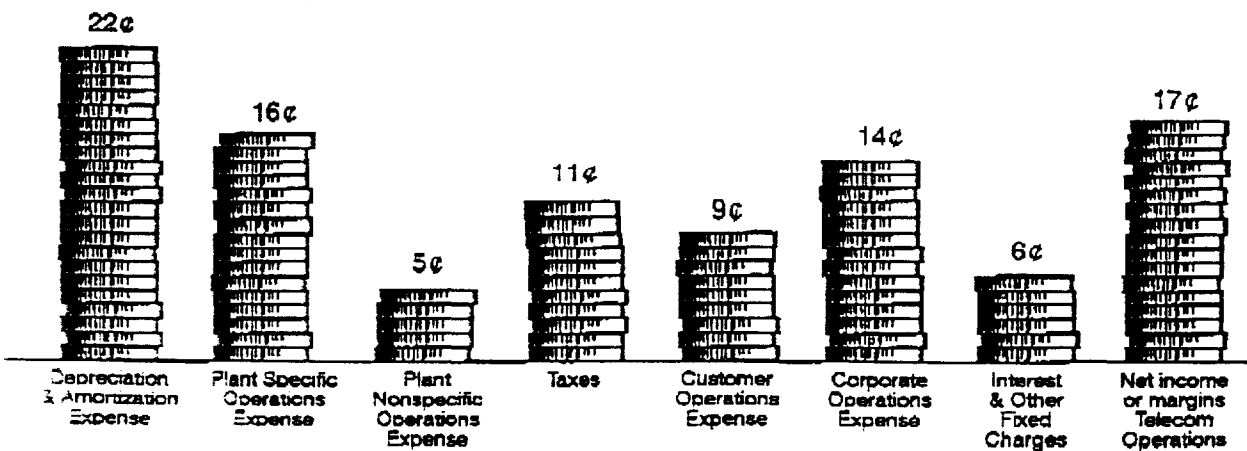
Chart 2

Source of Revenues, Distribution of Costs and Margins
By Borrowers Operating Telecommunications Systems - Calendar Year 1997

Source of revenues*



Distribution of costs and margins**



* Adjusted for uncollectible revenues.

** Excludes other operating income and expense.

**APPENDIX OF
DIRECT CASE IN
CC DOCKET NO. 98-166**

**FILED ON BEHALF OF
THE UNITED STATES TELEPHONE ASSOCIATION, NATIONAL
TELEPHONE COOPERATIVE ASSOCIATION, NATIONAL
RURAL TELECOM ASSOCIATION, ORGANIZATION FOR THE
PROMOTION AND ADVANCEMENT OF SMALL
TELECOMMUNICATIONS COMPANIES, INDEPENDENT
TELEPHONE AND TELECOMMUNICATIONS ALLIANCE, AND
NATIONAL EXCHANGE CARRIER ASSOCIATION**

ALIENT COMMUNIC. NDQ-ALNT					RECENT PRICE	27	P/E RATIO	17.4 (Trailing: 18.1 Median: 15.0)	RELATIVE P/E RATIO	0.96	DIVID YLD	2.6%	VALUE LINE	739																		
TIMELINESS	4	Lowered 6/19/98	High: 7.3	9.1	17.3	16.8	14.6	14.3	20.5	20.0	21.5	22.4	33.2	34.2	Target Price Range																	
SAFETY	3	Lowered 12/7/90	Low: 5.1	6.5	8.6	9.8	10.5	10.6	12.0	13.8	14.5	15.3	15.0	22.5	2001 2002 2003																	
TECHNICAL	2	Lowered 5/22/98	LEGENDS																													
BETA	.75	(1.00 = Market)	2.50 x Dividends p sh divided by Interest Rate																													
			Relative Price Strength																													
			2-for-1 split 8/97																													
			2-for-1 split 11/89																													
			2-for-1 split 1/94																													
			Shaded area indicates recession																													
2001-03 PROJECTIONS																																
Ann'l Total																																
Price	40	Gain	12%	Return	1%																											
High	40	(+50%)																														
Low	25	(-5%)																														
Insider Decisions																																
A S O N D J F M A																																
to Buy																																
Options																																
to Sell																																
Institutional Decisions																																
3Q1997 4Q1997 1Q1998																																
to Buy																																
to Sell																																
Hld'g (%)																																
Percent shares traded																																
4.5																																
3.0																																
1.5																																
			% TOT. RETURN 5/98																													
			1 yr. 18.2																													
			3 yr. 63.3																													
			5 yr. 97.9																													
			25.8																													
			87.8																													
			127.3																													
			VALUE LINE PUB. INC. 01-03																													
1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Revenues per sh	12.65													
4.05	4.11	4.46	4.38	4.80	4.91	5.54	5.14	5.22	5.36	5.39	5.66	6.08	6.14	7.26	7.83	8.90	9.70	"Cash Flow" per sh	4.30													
1.20	1.27	1.39	1.34	1.44	1.39	1.61	1.59	1.61	1.71	1.80	1.89	2.13	1.81	2.50	2.80	3.10	3.35	Earnings per sh A	2.20													
.39	.40	.50	.44	.55	.61	.75	.75	.74	.83	.90	1.01	1.14	.84	1.22	1.46	1.55	1.65	Div'ds Decl'd per sh B	.76													
.24	.25	.26	.28	.28	.29	.33	.37	.37	.40	.43	.49	.49	.57	.61	.65	.72	.72	Cap'l Spending per sh	2.50													
1.11	.93	.73	.90	.94	.84	.83	1.04	1.06	1.02	.84	.77	1.00	1.23	1.20	1.36	2.10	2.20	Book Value per sh	13.60													
3.02	3.13	3.39	3.51	3.77	4.06	4.29	4.65	5.00	5.41	5.80	5.65	6.07	6.95	7.52	8.16	8.05	10.00	Common Shs Outst'g C	36.00													
31.84	32.57	32.57	33.19	33.19	34.67	32.98	32.98	32.93	32.89	32.67	32.60	32.35	36.65	36.41	36.58	36.00	36.00	Avg Ann'l P/E Ratio	15.0													
6.8	8.3	6.8	9.6	10.1	10.1	10.5	17.6	18.1	14.5	13.5	15.4	14.1	19.9	14.3	14.5	14.5	14.5	Relative P/E Ratio	1.05													
.75	.70	.63	.78	.68	.68	.87	1.33	1.34	.93	.82	.91	.92	1.33	.90	.84	.84	.84	Avg Ann'l Div'd Yield	2.3%													
9.3%	7.6%	7.8%	6.6%	4.9%	4.7%	4.2%	2.8%	2.8%	3.3%	3.6%	3.2%	3.0%	3.4%	3.5%	3.1%																	
CAPITAL STRUCTURE as of 6/30/98																			182.6	169.6	172.1	176.3	176.2	184.4	196.8	225.1	264.2	286.3	320	350	Revenues (\$mil)	455
Total Debt \$160.0 mill. Due in 5 Yrs \$36.0 mill.																			25.5	25.1	24.7	27.8	29.6	33.2	37.2	29.0	45.0	53.0	56.0	60.0	Net Profit (\$mil)	80.0
LT Debt \$136.0 mill. LT Interest \$9.5 mill.																			30.1%	33.1%	32.5%	37.7%	35.2%	37.2%	38.5%	38.9%	39.6%	39.3%	40.0%	40.0%	Income Tax Rate	40.0%
(LT interest earned: 11.0%; total interest coverage: 10.0%) (31% of Cap'l)																			14.0%	14.8%	14.4%	15.8%	16.8%	18.0%	18.9%	12.9%	17.0%	18.5%	17.5%	17.0%	Net Profit Margin	17.5%
Pension Liability None																			28.9%	25.4%	33.2%	30.3%	27.5%	18.9%	18.0%	31.2%	27.0%	23.7%	31.0%	30.0%	Long-Term Debt Ratio	25.0%
Pfd Stock None																			67.0%	70.8%	63.8%	67.0%	70.8%	79.1%	80.2%	67.5%	71.8%	75.1%	69.0%	70.0%	Common Equity Ratio	75.0%
Common Stock 35,630,998 shs. as of 7/31/98 (69% of Cap'l)																			211.3	216.7	258.3	265.5	267.5	232.5	244.9	377.3	381.8	397.0	450	500	Total Capital (\$mil)	625
MARKET CAP: \$900 million (Small Cap)																			238.6	244.8	250.3	253.4	249.6	246.1	241.8	255.3	255.0	259.0	280	290	Net Plant (\$mil)	325
CURRENT POSITION																			13.3%	12.8%	10.8%	11.8%	12.5%	15.6%	16.1%	8.3%	12.4%	14.4%	14.5%	14.0%	Return on Total Cap'l	13.5%
(\$MILL.)																			17.0%	15.5%	14.3%	15.0%	15.3%	17.6%	18.5%	11.2%	16.1%	17.5%	18.0%	16.5%	Return on Shr. Equity	16.0%
Cash Assets																			17.8%	16.0%	14.7%	15.4%	15.5%	17.9%	18.8%	11.3%	16.3%	17.7%	18.0%	16.5%	Return on Com Eq	16.0%
Other																			9.8%	8.2%	7.3%	8.1%	8.0%	9.5%	10.2%	4.0%	8.3%	9.8%	9.5%	9.5%	Retained to Com Eq	10.5%
Current Assets																			45%	50%	51%	48%	49%	47%	46%	65%	49%	45%	46%	43%	All Div'ds to Net Prof	35%
Accts Payable																													BUSINESS: Aliant Communications Inc. (Lincoln Telecom. prior to 6/96) is a holding company. Principal subsidiaries are Aliant Communications Co. and Aliant Cellular, Inc. (acquired 7/95). Aliant provides statewide local and long-distance service in Nebraska. Owns 100% of Omaha Cellular, Ltd. Other operations include inter-exchange service, telecomm. equipment distribution, and data & answering svcs. Has 273,008 access lines; about 205,915 POPs. Est'd. plant age: 5.5 yrs. Has approximately 1,700 employees. Officers and directors own 10.1% of common shs.; Sahara Enterprises Inc., 8.8% (3/98 proxy). Chairman: Thomas C. Woods III. President & C.E.O.: Frank H. Hisabeck. Address: 1440 M Street, Lincoln, NE 68508. Telephone: 402-436-3737. Internet: www.aliant.com.			
Debt Due																													Aliant Communications' wireless operations should continue to fuel its overall top line, in terms of growth, brand awareness, and customer retention. Aliant's wireless customer base now totals close to 300,000 customers, the largest such operation in Nebraska. As of the second quarter, the company's cellular penetration rate stood at 16.4%, with a customer turnover rate of only 0.85%, about half the industry average. In the near term, Aliant's cost-efficient AliantToGo prepaid analog cellular plan should provide ample opportunities for growth. We feel the company can leverage its long-term wireline agreement with the University of Nebraska-Lincoln to market its prepaid cellular offering, and capture a larger share of the growing college-age market. And while Aliant has increased spending on the digital side to build out and market its PCS network, it has posted strong market-share gains, in lieu of competition from AirTouch and Sprint PCS in Omaha, and from Western Wireless in Lincoln. With its major-market digital networks scheduled for completion early next year, we project Aliant's wireless business to contribute 30% to total revenues in 1999. Meanwhile, Aliant's wireline businesses should continue to grow at a moderate pace. Aliant, the incumbent local exchange carrier (ILEC) in Lincoln, lowered its business rate for basic service under a rate rebalancing plan in March of this year. We feel this has made its core service area less attractive to competitors, as US West has been the only major carrier to request an interconnection. The company's Navix Internet service should boost revenues here, inducing its customers' need for second-line access. And Aliant's start-up competitive local exchange carrier (CLEC) in Omaha, its primary target market, should become earnings positive by the end of 1999. All told, we're looking for about a 6% bottom line gain both in 1998 and 1999. These shares are currently ranked to underperform the broader market in the year ahead. And, as a 3- to 5-year holding, our estimates suggest ALNT's price-appreciation potential is below that of the median of all stocks in the Value Line universe. Christopher T. Conry October 9, 1998			
Other																																
Current Liab.																																
73.6																																
84.8																																
94.7																																
ANNUAL RATES																																
of change (per sh)																																
Past 10 Yrs.																																
Past 5 Yrs.																																
Est'd '95-'97																																
to '01-'03																																
Revenues																																
5.0%																																
"Cash Flow"																																
4.5%																																
Earnings																																
8.0%																																
Dividends																																
8.0%																																
Book Value																																
7.0%																																
QUARTERLY REVENUES (\$ mil.)																																
Cal-ender																																
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Full Year																																
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RECENT PRICE	47	P/E RATIO	21.4 (Trailing: 21.0 Median: 16.0)	RELATIVE P/E RATIO	1.44	DIVID YLD	2.6%	VALUE LINE	740
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TIMELINESS	3	Raised 2/6/98
SAFETY	2	New 7/27/90
TECHNICAL	3	Lowered 7/24/98
BETA .85 (1.00 = Market)		
2001-03 PROJECTIONS		
	Ann'l Total	
Price	75	Gain (+60%) 14%
High	75	Low 55 (+15%) 7%
Insider Decisions		
	N	D J F M A M J J
To Buy	0	0 0 0 0 0 0 0 1
Options	1	0 0 4 0 0 0 0 0
To Sell	1	0 0 4 0 0 0 0 0
Institutional Decisions		
	Q11997	Q11998 Q11999
To Buy	147	149 168
To Sell	121	125 109
Hdr's(000)	78264	82466 100387
Percent shares traded		
	6.0	4.0
% TOT. RETURN 8/98		
	THIS STOCK	VL ARTH. INDEX
1 yr.	46.2	-11.4
3 yr.	75.1	34.7
5 yr.	76.4	70.3

1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	© VALUE LINE PUB., INC.	01-03
5.33	7.23	7.38	7.19	7.11	7.41	8.42	9.25	9.93	11.04	11.33	12.49	15.76	18.43	17.05	17.77	19.00	21.35	Revenues per sh	30.15
1.60	1.65	1.78	1.82	1.91	2.18	2.25	2.39	2.42	2.53	2.58	2.74	3.54	3.93	4.21	4.62	4.65	5.30	"Cash Flow" per sh	7.35
.57	.59	.66	.71	.77	.90	1.04	1.13	1.17	1.15	1.25	1.29	1.60	1.76	1.92	2.12	2.10	2.50	Earnings per sh ^A	3.95
.37	.38	.40	.42	.44	.51	.52	.59	.66	.71	.76	.82	.90	.98	1.06	1.12	1.18	1.26	Div'd Decl'd per sh ^B	1.46
2.03	1.68	1.66	1.66	1.59	1.57	1.58	1.75	1.92	2.03	1.99	2.27	3.17	2.76	2.48	2.97	2.90	3.00	Cap'l Spending per sh	3.00
4.20	4.42	4.66	5.06	5.18	5.76	6.14	6.67	6.35	6.77	7.01	8.24	8.60	10.18	11.15	11.97	11.80	13.05	Book Value per sh ^C	18.05
61.85	83.81	86.80	93.41	98.03	99.28	126.93	132.54	158.44	158.38	184.68	187.46	187.98	189.27	187.20	183.67	275.50	275.55	Common Shs Outst'g ^D	275.50
6.8	8.9	7.6	8.6	10.6	10.6	10.5	14.4	13.4	16.9	16.5	20.6	16.9	15.8	16.0	16.1	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	16.5
7.5	7.5	7.1	7.0	7.2	7.1	.87	1.09	1.00	1.06	1.00	1.22	1.11	1.06	1.00	.93			Relative P/E Ratio	1.20
9.5%	7.4%	8.1%	6.8%	5.4%	5.3%	4.8%	3.6%	4.2%	3.7%	3.7%	3.1%	3.3%	3.5%	3.4%	3.2%			Avg Ann'l Div'd Yield	2.2%

CAPITAL STRUCTURE as of 6/30/98	1068.5	1225.6	1573.8	1747.8	2082.1	2342.1	2961.7	3109.7	3192.4	3263.6	5235	5885	Revenues (\$mill)	8300
Total Debt \$1742.4 mill. Due in 5 Yrs \$66.0 mill.	134.1	153.9	192.8	186.0	234.1	243.4	304.0	335.6	365.9	399.7	580	690	Net Profit (\$mill)	1090
Lt Debt \$1694.4 mill. Lt Interest \$119.0 mill. Includes \$6.5 mill. capitalized leases. (Lt interest earned: 3.8c total interest coverage: 3.7x) Pfd Stock \$14.3 mill. Pfd Div'd \$.9 mill. Incl. 25,392 shs. \$2.06 cum; (\$25 liq'd value) each conv. into 5,963 com. shs.; 340,792 shs. 5%-6% (\$25 par) redeemable; 60,188 shs. \$2.25 cum. (\$.28 liq'd value) each conv. into 5,486 com.; 39,400 shs. 7¼% (no par) redeemable yearly through 1998.	31.7%	30.1%	32.0%	32.1%	35.5%	42.4%	38.1%	38.0%	37.3%	37.4%	38.0%	38.0%	Income Tax Rate	38.0%
	12.6%	12.6%	12.3%	10.6%	11.2%	10.4%	10.3%	10.8%	11.5%	12.2%	11.1%	11.7%	Net Profit Margin	13.1%
	45.2%	46.5%	48.8%	47.6%	43.7%	50.5%	53.1%	47.6%	45.5%	45.8%	52.0%	48.5%	Long-Term Debt Ratio	37.0%
	52.2%	51.4%	52.0%	51.4%	55.5%	48.9%	46.4%	52.0%	54.1%	53.8%	48.0%	51.0%	Common Equity Ratio	62.5%
	1492.4	1719.2	1934.0	2085.3	2332.3	3159.4	3479.3	3704.2	3859.7	4088.3	6785	7030	Total Capital (\$million)	8390
	1552.5	1614.5	1754.9	1825.4	2062.0	2876.4	2963.2	2972.8	3041.5	3190.5	4535	4985	Net Plant (\$million)	6340
	10.9%	11.0%	12.0%	11.0%	12.0%	9.2%	10.7%	10.8%	11.1%	11.3%	10.5%	11.7%	Return on Total Cap'l	14.5%
	16.4%	16.7%	18.7%	17.0%	17.8%	15.6%	18.6%	17.3%	17.4%	18.1%	18.0%	19.0%	Return on Shr. Equity	20.5%
	16.9%	17.1%	19.0%	17.2%	17.9%	15.6%	18.7%	17.4%	17.5%	18.1%	18.0%	19.0%	% Return on Com Equity	20.5%
Common Stock 184,354,525 shs. MARKET CAP: \$8.7 billion (Large Cap)	8.5%	8.3%	8.7%	8.6%	7.7%	7.1%	8.3%	7.8%	8.0%	8.8%	8.0%	9.5%	Retained to Com Eq	13.0%
	51%	52%	55%	62%	58%	55%	56%	55%	54%	52%	56%	50%	All Div's to Net Prof	37%

CURRENT POSITION	1996	1997	6/30/98
(SMILL)			
Cash Assets	13.9	16.2	36.7
Other	695.6	649.6	665.4
Current Assets	709.5	665.8	702.1
Accts Payable	240.6	237.9	210.1
Debt Due	37.8	48.0	48.0
Other	312.3	351.4	404.4

BUSINESS: ALLTEL Corp. provides local, long-distance, wireless, and Internet service to 5.6 million customers in 22 states. Also provides information svcs worldwide. Acq'd Systematics 5/90, Computer Power 3/91, TDS Healthcare 10/93, 360° Comm. 7/98. 1997 rev. breakdown: telephone, 39% (56% of op. inc.); data process. mgmnt, 30% (18%); wireless (8.9 mill. POPs), 17% (23%); product distrib., 11% (2%); other, 3% (1%). 95% of switches are digital. '97 deprec. rate: 8.2%. Est. plant age: 5 yrs. Has 20,000 employees, 92,000 sktldrs. Stephens Grp owns 9.0% of com. stock, Cincinnati Fin'l, 7.0%, Off's & Dir's, 1.1% (5/98 proxy). Chmn. & C.E.O.: Joe T. Ford; Pres. & C.O.O. Scott T. Ford. Inc.: DE. Addr.: One Allied Dr., Little Rock, AR 72202. Tel.: 501-661-8000.

Current Liab.	590.7	637.3	662.5
Fin. Chg. Cov.	535%	578%	626%

ANNUAL RATES	Past	Past	Est'd '95-'97
of change (per sh)	10 Yrs.	5 Yrs.	10:00
Revenues	9.0%	9.5%	10.1%
"Cash Flow"	8.0%	11.0%	9.5%
Earnings	9.5%	10.5%	12.5%
Dividends	8.5%	8.0%	5.5%
Book Value	7.5%	10.5%	9.5%

Our estimates and projections for ALLTEL now reflect the acquisition of 360° Communications. ALLTEL completed the deal last July, issuing 91 million common shares and assuming \$1.8 billion in debt. We look for annual operating savings from the integration of 360° to average from \$20 million in 1998 to \$100 million in 1999, compared to the year-earlier figure. ALLTEL's revenue per customer slipped in the first six months of 1998 to \$51.00 from \$53.00 in the comparable '97 period, but the second-quarter rate of \$51.00 was better than the first-quarter tally of \$49.00; the average industry rate is about \$45.00. Issuing

Calendar	QUARTERLY REVENUES (\$ mil.)					Full Year
	Mar.31	Jun.30	Sep.30	Dec.31		
1995	763.6	788.5	785.8	773.8		3109.7
1996	774.3	804.4	807.4	806.3		3192.4
1997	784.3	816.9	813.8	848.6		3263.6
1998	8201.8 ^E	1333.1 ^E	1340	1360.1		5235
1999	1350	1495	1510	1530		5885

Calendar	EARNINGS PER SHARE A					Full Year
	Mar.31	Jun.30	Sep.30	Dec.31		
1995	.41	.43	.45	.47	1.76	<p>company will likely produce low-double-digit revenue and share-earnings growth annually to 2001-2003.</p> <p>360° should help support strong wireless results. Players in this telecom sector have had to contend with declining monthly average revenue per customer, due to the industry averages. Wireless operations are performing nicely as evidenced by solid local access line growth (6% annualized), and strong network access and long-distance revenue gains (12% through June 30th). Start-up costs of competitive local access, Internet, and network man-</p>
1996	.45	.48	.48	.51	1.92	
1997	.49	.52	.53	.58	2.12	
1998	.47 ^E	.52 ^E	.54	.57	2.10	
1999	.57 ^E	.62	.64	.67	2.50	

Calendar	QUARTERLY DIVIDENDS PAID \$					Full Year
	Mar.31	Jun.30	Sep.30	Dec.31		
1994	22	22	22	22		.88
1995	24	24	24	24		.96
1996	26	26	26	26		1.04
1997	275	275	275	275		1.10
1998	29	29	29	29		

<p>(A) Basic earnings in '97; prior year earnings are diluted. Excludes nonrecurring gains (losses): '86, (37c); '87, 16c; '88, 9c; '91, 2c; '92, (3c); '93, 10c; '94, (17c); '95, (28c); '96, (39c); '97, 58c; '98, (19c). Next earnings report due late Oct. (B) Next dividend meeting about Oct. 23. Goes ex about Dec. 3. Dividend payment dates: about the 3rd of January, April,</p>	<p>July, and October. = Dividend reinvestment plan available (C) Includes intangibles. In '97 available \$806.5 million, \$3.30/share. (D) In millions, add for stock splits. (E) Pro forma.</p>
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Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	65
Earnings Predictability	95

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BELL ATLANTIC NYSE-BEL										RECENT PRICE	48	PE RATIO	17.3 (Trailing: 18.5 Median: 15.0)	RELATIVE P/E RATIO	1.16	DVD YLD	3.3%	VALUE LINE	742
TIMELINESS	3	Raised 10/10/97	High: 19.9	18.6	28.1	28.6	27.1	26.9	34.5	29.8	34.4	37.4	45.9	53.0				Target Price Range	
SAFETY	1	Raised 4/15/94	Low: 15.1	15.6	17.3	19.8	21.5	20.1	24.8	24.2	24.2	27.6	28.4	40.4				2001	2002
TECHNICAL	3	Lowered 7/17/98	LEGENDS																
BETA	.95	(1.00 = Market)	1.46 x Dividends p sh divided by Interest Rate																
2001-03 PROJECTIONS			Relative Price Strength																
Ann'l Total Return			2-for-1 split 4/98																
Price Gain			2-for-1 split 5/90																
Ann'l Total Return			2-for-1 split 6/98																
Options: Yes			Options: No																
Shaded area indicates recession																			
High	55	(+15%)																	
Low	45	(-5%)																	
Insider Decisions																			
Institutional Decisions																			
4Q1997 1Q1998 2Q1998																			
To Buy 386 362 332																			
To Sell 279 337 368																			
Hr/1000 603324 623752 588540																			
Percent shares traded			6.0																
			4.0																
			2.0																

P/E RATIO	22.3
-----------	------

RELATIVE P/E RATIO 1.50

**VALUE
LINE**

(B) Next div'd meeting about Nov. 24. Goes ex about Jan. 6. Approx. div'd payment dates: the first of Feb., May, Aug., and Nov.

Company's Financial Strength	A+
Stock's Price Stability	75
Price Growth Persistence	70
Earnings Predictability	95

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(A) Diluted earnings. Excl. extra. gain: '82, 1¢. Excl. nonrecur. gains (losses): '83, (1¢); '84, 1¢; '87, 8¢; '88, 2¢; '90, 3¢; '92, 19¢; '93, 1¢; '94, 11¢; '95, 2¢; '96, (1¢); '97, \$1.16; '98Q1.

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16c; '88Q2, 16c. Next earnings report due late October. (B) Next div'd meeting about November 28th; goes ex about December 4th. Div'd. payment dates about 15th of March, June,

Sept., Dec. = Div'd. reinvest. plan avail.
(C) Includes intangibles in '97: \$1,767.4 mil., \$19.40/share.
(D) In millions, adjusted for stock splits.

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	80
Earnings Predictability	85

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NYSE-CSN

26

Trailing: 20.3
Median: 19.0

DIV'D
YLD

VALU
LIN

746

		Target Price Range		
		2001	2002	2003
				80
				60
				50

					40
					32
					24
					20
					16

				10
				12
				10
				8
				6

% TOT RETURN 100

	THIS STOCK	VL. ARTH. INDEX	
1 yr.	-11.6	-11.4	
3 yr.	80.9	34.7	
5 yr.	151.0	70.3	

1999	VALUE LINE PUB., INC.	01-03
19.15	Revenues per sh	26.45
3.80	"Cash Flow" per sh	5.20
1.75	Earnings per sh ^A	2.90
.40	Div'ds Decl'd per sh ^B	.46
2.05	Cap'l Spending per sh	2.20
8.45	Book Value per sh ^D	15.10
138.00	Common Shs Outst'g ^C	140.00
Average Line Statistics	Avg Ann'l P/E Ratio	16.0
	Relative P/E Ratio	1.15
	Avg Ann'l Div'd Yield	1.0%

2645	Revenues (\$mill)	3700
245	Net Profit (\$mill)	410
35.0%	Income Tax Rate	35.0%
9.3%	Net Profit Margin	11.1%

31.0%	Long-Term Debt Ratio	33.0%
69.0%	Common Equity Ratio	67.0%

1989	Total Capital (\$mill)	3130
725	Net Plant (\$mill)	705
15.5%	Return on Total Cap'l	14.0%

21.0%	Return on Shr. Equity	19.5%
21.0%	Return on Com Equity	19.5%
16.0%	Retained to Com Eq	16.0%

23%	All Div'ds to Net Prof	16%
-----	------------------------	-----

54%; CBIS, 32%; Matrixx, 14%. 1997
ant age: 5 years. Has about 20,800 empl.
owns 9.5% of shares; FMR Corp., 5.2%
Charles S. Mechern. Pres. & C.E.O.: J.T.
dr.: 201 E. 4th St., P.O. Box 2301, Cincin-
345-6301. Internet: www.cinbellinc.com

al revenues won't offset

new price cap, the accord improve its relatively low, ling service penetration ense side, Year 2000 com-ubstantial in 1998, will eatly reduced in 1999.

second-half 1998 share lag the year-ago level, we expect to rebound next year of 75¢ a share.

...dilute share net by \$0.20
...ts now appear to be three
...than we'd thought. Also,
(L) Internet access, over

ng telephone lines, should
year-end. This, too, holds
m earnings potential.
r appreciation outlook
untimely shares mir-
average stock.

these incremental revenues won't offset the effects of the new price cap, the accord enables CBT to improve its relatively low, 11% custom-calling service penetration rate. On the expense side, Year 2000 compliance costs, substantial in 1998, will probably be greatly reduced in 1999. Therefore, while second-half 1998 share net will probably lag the year-ago level, we expect an earnings rebound next year of about 35%, to \$1.75 a share.

PCS are now available. In a pending venture with AT&T, CSN will take an 80% stake in a wireless network in Cincinnati and Dayton. While this deal should close in 1998, CSN has been signing up subscribers and recording operating losses, which likely will dilute share net by \$0.20 per annum. Profits now appear to be three years off, earlier than we'd thought. Also, high-speed (ADSL) Internet access, over customers' existing telephone lines, should be available by yearend. This, too, holds excellent long-term earnings potential.

The 3- to 5-year appreciation outlook for CSN's now untimely shares mirrors that of the average stock.

Todd A. Schwartzman October 9, 1998

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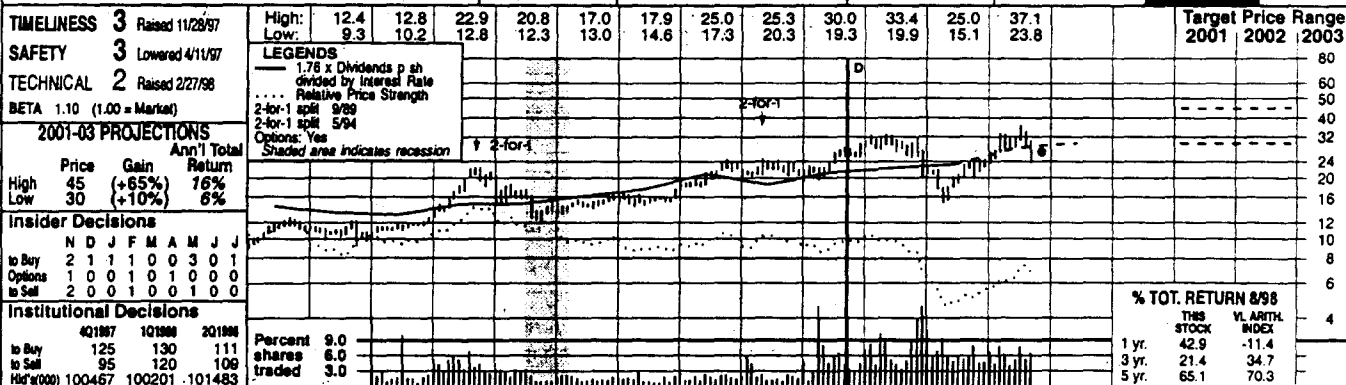
ment dates: Feb. 1, May 1, Aug. 1, Nov. 1. ■ Dividend reinvestment plan available. (C) In millions, adjusted for stock splits. (D) Includes intangibles: in '97, \$195.0 million, \$1.43/share.

Company's Financial Strength	A
Stock's Price Stability	50
Price Growth Persistence	40
Earnings Predictability	60

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FRONTIER CORP. NYSE:FRO

RECENT PRICE 27 P/E RATIO 25.2 (Trailing: 44.3 Median: 18.0) RELATIVE P/E RATIO 1.69 DIV'D YLD 3.4% VALUE LINE 750



Frontier Corp. was formed as a holding company on January 1, 1995 after its predecessor, Rochester Telephone Corp., split its operations into two divisions (Frontier Communications and Rochester Telephone). At that time, New York regulators approved the company's 7-year plan to open local markets to full competition. Since then, Frontier has aggressively expanded, acquiring WCT Communications, American Sharecom, Enhanced Telemanagement, Schneider Communications, and ALC Communications.

CAPITAL STRUCTURE as of 8/30/98
 Total Debt \$1027.5 mill. Due in 5 Yrs \$530.0 mill.
 LT Debt \$1021.0 mill. LT Interest \$80.0 mill.
 Incl. \$5.3 mill. 10.46% debt, cv. into 502,966 shs. at \$10.5375 each after 10/26/98.
 (LT interest earned: 4.1%; total interest coverage: 4.0x)
 Leases, Uncapitalized Annual rentals \$99.6 mill.
 Pfd Stock \$20.1 mill. Pfd Div'd \$1.0 mill
 201,254 shs. 4.6%-5.65% cumulative (\$100 par) callable at \$100-\$105.
 Common Stock 171,498,589 shs.
 MARKET CAP: \$4.6 billion (Large Cap)

CURRENT POSITION	1998	1997	8/30/98
(SMILL.)			
Cash Assets	30.9	24.7	76.9
Other	438.3	459.5	509.6
Current Assets	469.2	484.2	586.5
Accts Payable	322.3	328.1	410.0
Debt Due	6.3	5.3	6.5
Other	89.5	141.4	154.5
Current Liab.	418.1	474.8	571.0
Fix. Chg. Cov.	852%	219%	339%

ANNUAL RATES	Past	Past	Est'd '95-'97
of change (per sh)	10 Yrs.	5 Yrs.	to '01-'03
Revenues	4.0%	5.5%	7.5%
"Cash Flow"	-1.0%	-4.0%	11.5%
Earnings	-1.0%	-2.5%	16.5%
Dividends	3.0%	2.5%	4.0%
Book Value	-1.5%	-7.0%	6.0%

Cal-ender	QUARTERLY REVENUES (\$ mill.)	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1995	459.0 ^E 506.9 ^E 571.4 606.4	2143.7
1996	655.1 670.3 669.1 581.1	2575.6
1997	573.4 584.7 601.6 593.2	2352.9
1998	631.9 648.3 655 664.8	2600
1999	695 720 725 735	2875

Cal-ender	EARNINGS PER SHARE ^A	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1995	.30 ^E .33 ^E .12 .36	.87
1996	.39 .42 .45 .06	1.32
1997	.08 .26 .24 .09	.33
1998	.20 .26 .25 .29	1.00
1999	.27 .32 .31 .35	1.25

Cal-ender	QUARTERLY DIVIDENDS PAID ^B	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1994	.203 .203 .203 .203	.81
1995	.208 .208 .208 .208	.83
1996	.213 .213 .213 .213	.85
1997	.218 .218 .218 .218	.87
1998	.223 .223 .223 .223	

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	VALUE LINE PUB. INC.	01-03
10.43	11.13	10.38	11.04	12.07	13.34	13.47	13.56	15.73	14.34	15.15	16.70	Revenues per sh	22.15
2.41	2.29	2.22	2.41	2.75	2.87	2.99	1.96	2.48	1.59	2.30	2.65	"Cash Flow" per sh	3.80
1.06	.99	.86	.92	1.05	1.19	1.40	.87	1.32	.33	1.00	1.25	Earnings per sh ^A	2.10
.68	.72	.74	.76	.78	.80	.83	.84	.86	.88	.90	.94	Div'ds Decl'd per sh ^B	1.06
2.23	2.08	1.87	1.71	1.86	1.50	1.19	1.04	1.89	2.16	3.55	2.90	Cap'l Spending per sh	1.75
7.26	7.81	7.72	8.86	8.99	9.60	10.94	5.62	6.34	5.79	5.75	6.05	Book Value per sh	8.35
45.90	50.48	57.91	63.69	66.64	67.94	73.16	158.06	163.73	164.10	171.75	172.00	Common Shs Outst'g ^C	172.75
11.0	18.0	18.4	16.3	15.2	17.6	18.0	27.8	22.1	NMF	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	17.0
.91	1.36	1.37	1.04	.92	1.04	1.05	1.86	1.38	NMF			Relative P/E Ratio	1.20
5.9%	4.0%	4.6%	5.0%	4.9%	3.8%	3.7%	3.5%	3.0%	4.2%			Avg Ann'l Div'd Yield	3.0%
478.8	562.0	600.0	703.2	804.0	906.5	985.5	2143.7	2575.6	2352.9	2600	2875	Revenues (\$mill)	3625
49.6	51.5	49.7	57.5	70.5	81.6	102.7	141.9	217.9	54.6	170	215	Net Profit (\$mill)	365
33.7%	32.6%	37.3%	37.3%	37.1%	38.0%	37.2%	41.1%	39.6%	44.7%	39.5%	40.0%	Income Tax Rate	40.0%
10.4%	9.2%	8.3%	8.2%	8.8%	9.0%	10.4%	6.6%	8.5%	2.3%	6.6%	7.5%	Net Profit Margin	9.5%
40.7%	44.8%	43.5%	50.2%	45.8%	42.1%	41.3%	40.4%	38.9%	49.0%	50.5%	50.5%	Long-Term Debt Ratio	47.5%
55.5%	52.2%	53.5%	47.9%	52.2%	55.7%	57.1%	58.1%	59.8%	50.0%	48.5%	48.5%	Common Equity Ratio	51.5%
600.1	755.4	834.7	1178.5	1147.2	1170.8	1402.0	1530.4	1735.4	1900.8	2045	2155	Total Capital (\$mill)	2795
688.0	756.7	855.4	1016.9	1039.7	1027.2	969.9	881.3	971.3	1037.8	1300	1515	Net Plant (\$mill)	1940
9.9%	8.5%	7.7%	6.7%	8.1%	9.0%	8.9%	11.0%	13.8%	4.1%	10.0%	11.5%	Return on Total Cap'l	14.5%
13.9%	12.3%	10.5%	9.8%	11.3%	12.1%	12.5%	15.6%	20.6%	5.6%	17.0%	20.0%	Return on Shr. Equity	24.5%
14.5%	12.7%	10.9%	10.0%	11.6%	12.3%	12.7%	15.8%	20.9%	5.6%	17.5%	20.5%	Return on Com Equity	25.0%
5.4%	3.8%	1.0%	1.8%	3.2%	4.2%	5.4%	6.7%	7.6%	NMF	1.5%	5.0%	Retained to Com Eq	12.5%
64%	71%	91%	82%	73%	67%	58%	58%	64%	NMF	80%	75%	All Div'ds to Net Prof	51%

BUSINESS: Frontier Corp. (formerly Rochester Telephone), a holding company, serves Rochester & other areas of NY and parts of 13 other states through acquired & mostly rural telcos. Other revs. derived from unregulated ops incl'g regional long-distance, network systems, and cellular (serves 5.0 mill. population equivalents or "POPS"). Local access lines: 1,013,000, almost 100% digital. Pro-

vides interexchange service with AT&T. '97 rev. mix: long distance, 70%; local, 28%; wireless & other, 2%. '97 deprec. rate: 8.5%. Has 7,445 employees, 26,635 stklhds. Offs. & Dirs. own less than 1% of com.; Del. Mgmt. Hldgs., 7.9% (3/98 proxy). Chmn.: Vacant. C.E.O., Pres., & C.O.O.: Joseph P. Clayton, Inc. NY. Addr.: 180 S. Clinton Ave., Rochester, NY 14646. Tel.: 716-777-1000.

Frontier is quickly building a sizable, national communications service network. Factoring in minor construction delays, we expect the company to have its 13,000-mile Optronics fiber-optic network in place early next year, serving the lucrative small- and medium-sized business and wholesale carrier sectors. And by the end of 1999, another 4,660 miles of cable will be added, lifting market coverage to 120 U.S. cities. An agreement with Williams Communications to serve the southeast market accounts for 3,000 of the additional miles. The remainder stems from a pact with Western Telecommunications, which operates in the West. These deals will help lessen the company's dependence on the Qwest Communications network. The Optronics network, utilizing dense wave division multiplexing equipment, offers considerably more capacity and management flexibility than traditional networks. The network will allow Frontier to pursue a greater share of the fast-growing, highly profitable Intranet, Internet, and data markets. Separately, carrier deals, such as those made with Level 3 Communications and Miami-based Amer-

icatel, augur well for future results. Efforts to improve the company's focus continue. The new network, along with stepped-up marketing, will help to boost wholesale volumes and better diversify the customer base. Aggressive action is also being taken to expand competitive local exchange services. In addition, management is moving to scale back non-critical services (e.g., prepaid calling cards), cut sales force turnover, enhance service distribution, reduce account churn, and move customers to a unified billing system. SG&A, now about 25% of revenues, should continue to trend lower going forward, moving closer to the company's 22% target.

Frontier stock is ranked to match year-ahead market performance. Considering the telco's new network, better focus, and strong local phone business, we project solid revenue and share-net advances to 2001-2003. Given with the recent share-price pullback, the stock's total-return potential over that time is appealing when compared to the telecom industry average.

David M. Reimer

October 9, 1998

(A) Diluted earnings. Excludes nonrecurring gains/losses: '87, 2c; '89, 41c; '91, 32c; '93, 4c; '95, 78c; '96, net (5c). Includes unusual loss: '90, 1c; '95, 46c; '97, (64c). Next earnings report due late Oct. (B) Next dividend meeting about Dec. 15. Goes ex about Jan. 13. Dividend payment dates about the 1st of Feb., May, Aug., and Nov. = Dividend reinvestment plan available. (C) In millions, adjusted for stock splits. (D) Acquired ALC Communications 8/16/95. (E) Restated to reflect acquisitions.

Company's Financial Strength	A+
Stock's Price Stability	45
Price Growth Persistence	55
Earnings Predictability	40

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SBC COM'ICATIONS NYSE-SBC				RECENT PRICE	44	P/E RATIO	20.4 (Trailing: 22.1 Median: 15.0)	RELATIVE P/E RATIO	1.37	DIVID YLD	2.3%	VALUE LINE	757					
TIMELINESS	3	Raised 1/9/98	High: 11.4	10.7	16.1	16.2	16.5	18.7	23.5	22.1	29.3	30.1	38.1	46.6	Target Price Range	2001	2002	2003
SAFETY	2	Lowered 7/10/98	Low: 7.1	8.3	9.7	11.8	12.3	14.2	17.1	18.4	19.8	23.0	24.6	35.0				
TECHNICAL	3	Lowered 8/21/98	LEGENDS 2.35 x Dividends p sh divided by Interest Rate Relative Price Strength 3-for-1 split 5/97 2-for-1 split 5/93 2-for-1 split 3/98 Options: Yes Shaded area indicates recession															
BETA	.90	(1.00 = Market)	2001-03 PROJECTIONS Ann'l Total Price Gain Return High 60 (+35%) 10% Low 45 (Nil) 3%															
Insider Decisions			Percent shares traded 6.0 4.0 2.0															
Institutional Decisions			% TOT. RETURN 8/98 THIS STOCK 1 yr. 43.5 3 yr. 64.4 5 yr. 96.7 V. ARITH. INDEX -11.4 34.7 70.3															
CAPITAL STRUCTURE as of 6/30/98			Revenues per sh 20.60 "Cash Flow" per sh 6.85 Earnings per sh A 3.35 Div'ds Decl'd per sh B 1.44 Cap'l Spending per sh 6.50 Book Value per sh C 13.05 Common Shs Outst'g D 1840 Avg Ann'l P/E Ratio 16.0 Relative P/E Ratio 1.15 Avg Ann'l Div'd Yield 2.7%															
Leases, Uncapitalized Annual rentals \$168.0 mill.			Revenues (\$mill) A 37900 Net Profit (\$mill) 6160 Income Tax Rate 38.0% Net Profit Margin 16.3% Long-Term Debt Ratio 40.5% Common Equity Ratio 57.0% Total Capital (\$mill) 42000 Net Plant (\$mill) 41700 Return on Total Cap'l 16.0% Return on Shr. Equity 24.5% Return on Com Equity 25.5% Retained to Com Eq 14.5% All Div'ds to Net Prof 43%															
Pension Liability None			BUSINESS: SBC Communications Inc. is one of the seven regional holding companies formed by AT&T in 1983 to hold its divested local telephone business. It provides telecommunications services through two main subsidiaries, Southwestern Bell (SWBell) and Pacific Bell (PacBell). SWBell (48% of access lines) serves Arkansas, Kansas, Missouri, Oklahoma and Texas, and PacBell (52% of access lines) serves California. Acq. PacTel 4/97. Owns 9.6% of Tel-mex. Access lines in service: 34.2 mill. 1997 revenue breakdown: local service, 51%; network access, 23%; long-distance service, 9%; directory advertising, 8%; other, 9%. Has 118,340 employees. Chmn. and C.E.O.: E. Whitacre Jr. Inc.: DE. Address: 175 E. Houston, San Antonio, TX 78205-2233. Telephone: 210-821-4105.															
Pfd Div'd 80.3 mill.			We are raising our 1998 share earnings estimate for SBC Communications by a nickel, to \$2.10. For the second quarter, the company reported net income of \$0.53 a share, beating our call and Wall Street's consensus by \$0.03. The better-than-expected results were due to a significantly improved operating margin (it increased 200 basis points over the year-earlier period), stemming from cost synergies associated with the Pacific Telesis merger. SBC should leverage still further savings from this merger during the third and fourth quarters—as it moves toward its goal of reducing expense by \$1.2 billion by the year 2000—so we've widened our full-year 1998 operating margin assumption by 50 basis points, to 43.0%.															
Incl. \$1 billion TOPRS, \$500 mill. at 7.56%, \$500 mill. at 8.5%			Landline local service revenue growth continues to fuel the company's bottom line. The main volume drivers of this growth are access lines and vertical services. At the end of the second quarter, SBC's total domestic access lines were 34.2 million, an impressive 4.9% increase over the last 12 months. Of particular note has been the strong growth in business lines as customers demand increasingly more															
Common Stock 1837.3 million shs. as of 7/31/98			lines for modems and fax machines. At the company's SWBell and PacBell subsidiaries, business lines have grown 7.1% and 5.1% over the past year, respectively. With Texas and California, the company's two largest markets, expected to add a combined 4.4 million jobs over the next decade, we expect robust business access-line growth to continue for years to come. Higher sales of vertical services should also help SBC's earnings advance by roughly 12% annually through 2002. The company is making good on its strategy of duplicating SWBell's success in vertical service penetration at PacBell. A greater emphasis on maximizing sales efforts by customer service representatives has paid off. For the second quarter, vertical service features per line grew to 0.9 at PacBell, an increase of 24% year over year.															
MARKET CAP: \$80.8 billion (Large Cap)			SBC shares now offer below-average 3- to 5-year appreciation potential. But the company's proposed mergers with SNET and Ameritech, which are set to close in approximately three and 12 months, respectively, would likely enhance our 2001-2003 earnings projections.															
CURRENT POSITION			Justin Hellman															
(\$MILL.)			October 9, 1998															
Cash Assets																		
Other																		
Current Assets																		
Accts Payable																		
Debt Due																		
Other																		
Current Liab.																		
Fix. Chg. Cov.																		
ANNUAL RATES																		
of change (per sh)																		
Revenues																		
"Cash Flow"																		
Earnings																		
Dividends																		
Book Value																		
Cal-endar																		
QUARTERLY REVENUES (\$ mill.)																		
Mar.31 Jun.30 Sep.30 Dec.31 Full Year																		
1995																		
1996																		
1997																		
1998																		
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Cal-endar																		
EARNINGS PER SHARE A																		
Mar.31 Jun.30 Sep.30 Dec.31 Full Year																		
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Mar.31 Jun.30 Sep.30 Dec.31 Full Year																		
1994																		
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1997																		
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1999																		

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RECENT PRICE	78	P/E RATIO	25.0 (Trailing: 25.0 Median: 13.0)	RELATIVE P/E RATIO	1.68	DIV'D YLD	2.3%	VALUE LINE	759
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TIMELINESS - Suspended 1/16/98
SAFETY 2 Lowered 7/10/98
TECHNICAL - Suspended 1/16/98
BETA .85 (1.00 = Market)

High:	30.0	27.8
Low:	21.5	22.6

LEGENDS

— 1.60 x Dividends p sh
divided by Interest Rate

.... Relative Price Strength

2-for-1 split 1/90

Options: Yes

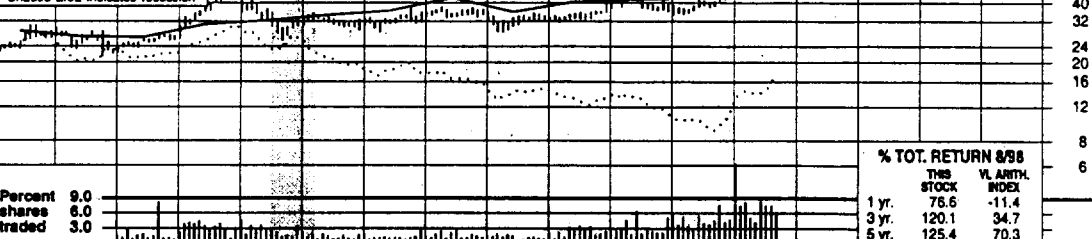
Shaded area indicates recession

2001-03 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(-10%)	N/A
Low	50	(-35%)	-7%

	N	D	J	F	M	A	M	J	J
to Buy	0	0	0	0	0	0	1	0	0
Options	0	1	0	0	5	3	1	1	1
to Sell	0	0	0	0	4	3	1	0	1

	4Q1987	1Q1998	2Q1998
to Buy	86	88	88
to Sell	72	84	87
Net (1000)	28532	25696	24881



1982	1983	1984	1985	1986	1987
18.87	20.22	21.36	21.54	23.41	23.73
3.95	4.50	4.78	4.90	5.43	5.59
1.53	1.98	2.02	1.91	2.23	2.27
1.17	1.28	1.33	1.37	1.41	1.46
3.45	3.07	4.01	4.03	4.73	6.15
13.53	14.30	15.02	15.59	16.51	17.44
57.29	58.51	59.60	60.53	61.21	61.93
7.7	8.6	7.9	10.5	11.6	11.5
.85	.73	.74	.85	.79	.77
10.0%	7.5%	8.3%	6.8%	5.4%	5.6%

1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	* VALUE LINE PUB., INC.	01-03
25.34	26.57	26.10	26.07	25.48	25.90	26.62	28.23	29.58	30.33	31.75	33.60	Revenues per sh	39.40
5.93	6.39	6.55	6.40	6.45	7.07	7.85	7.91	8.36	8.65	8.80	9.20	"Cash Flow" per sh	10.70
2.50	2.73	2.48	2.41	2.56	2.53	2.77	2.60	2.94	2.98	3.10	3.35	Earnings per sh ^A	4.40
1.52	1.64	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.76	1.75	Div'd Dec'd per sh ^B	1.80
5.25	6.20	6.33	5.12	4.57	4.19	4.38	5.44	5.58	7.09	7.30	7.30	Cap'l Spending per sh	6.55
18.48	19.14	18.19	18.78	19.79	19.38	14.77	5.42	7.05	8.96	11.40	13.00	Book Value per sh	18.25
62.47	62.88	62.04	62.63	63.36	63.85	64.51	65.12	65.65	66.67	68.50	68.50	Common Shs Outst'g ^C	68.50
10.3	13.8	13.8	13.4	12.7	14.1	11.8	13.3	13.7	13.4	<i>Sold figures are Value Line estimates</i>		Avg Ann'l P/E Ratio	13.5
.86	1.04	1.02	.86	.77	.83	.77	.89	.86	.77			Relative P/E Ratio	.95
5.9%	4.3%	5.2%	5.5%	5.4%	4.9%	5.4%	5.1%	4.4%	4.4%			Avg Ann'l Div'd Yield	3.0%

CAPITAL STRUCTURE as of 6/30/98
Total Debt \$1326.4 mill. Due in 5 Yrs \$480.0 mill.
LT Debt \$1146.5 mill. LT Interest \$80.5 mill.

(LT interest earned: 5.2x;
total interest coverage: 4.8x)

Leases, Uncapitalized Annual rentals \$19.8 mill.
Pension Liability None

Pfd Stock None

Common Stock 68,322,715 shs. as of 7/31/98

MARKET CAP: \$5.3 billion (Large Cap)

CURRENT POSITION	1996	1997	6/30/98
(\$MILL.)			
Cash Assets	9.0	12.3	11.5
Other	458.0	442.3	474.9
Current Assets	468.0	454.6	486.4
Accts Payable	252.0	266.8	213.4
Debt Due	215.2	186.3	179.9
Current Liab.	199.8	204.5	215.5
Current Liab.	667.0	657.6	608.8
Fix. Chg. Coy.	300%	421%	455%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '95-'97 to '01-'03
Revenues	2.5%	2.5%	5.0%
"Cash Flow"	4.5%	5.0%	4.5%
Earnings	3.0%	2.5%	7.5%
Dividends	2.0%	--	.5%
Book Value	-8.0%	-17.5%	17.0%

Calendar	QUARTERLY REVENUES (\$ mil.)				Fut. Year.
	Mar.31	Jun.30	Sep.30	Dec.31	
1995	443.1	453.0	471.5	470.9	1838.5
1996	474.0	487.8	488.2	491.9	1941.9
1997	482.7	501.6	509.7	528.3	2022.3
1998	527.1	538.6	545	564.3	2175
1999	560	570	575	595	2300

Calendar	EARNINGS PER SHARE ^A				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
1995	.72	.62	.64	.62	2.60
1996	.80	.77	.70	.67	2.94
1997	.70	.76	.74	.78	2.98
1998	.83	.77	.74	.76	3.10
1999	.85	.83	.82	.85	3.35

Calendar	QUARTERLY DIVIDENDS PAID \$ ^a				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
1994	.44	.44	.44	.44	1.76
1995	.44	.44	.44	.44	1.76
1996	.44	.44	.44	.44	1.76
1997	.44	.44	.44	.44	1.76
1998	.44	.44	.44		

1582.6	1670.5	1619.3	1632.8	1614.4	1653.6	1717.0	1838.5
155.4	170.1	153.6	147.5	159.2	160.6	177.6	168.8
38.5%	41.6%	38.9%	42.4%	40.9%	39.9%	40.7%	39.4%
9.8%	10.2%	9.5%	9.0%	9.9%	9.7%	10.3%	9.2%
42.6%	42.2%	47.5%	48.5%	45.5%	53.5%	50.0%	77.0%
57.4%	57.8%	52.5%	51.5%	54.5%	46.5%	50.0%	23.0%
2009.6	2082.6	2150.7	2283.4	2302.1	1838.9	1905.0	1535.3
2312.4	2502.2	2644.4	2713.3	2767.4	2770.1	2712.2	1565.5
9.8%	10.0%	9.2%	8.6%	8.9%	10.7%	11.1%	13.4%
13.5%	14.1%	13.6%	12.5%	12.7%	18.8%	18.6%	47.8%
13.5%	14.1%	13.6%	12.5%	12.7%	18.8%	18.6%	47.8%
6.4%	6.9%	5.2%	4.4%	5.1%	7.5%	8.4%	20.1%
52%	51%	62%	65%	60%	60%	55%	58%

1941.9	2022.3	2175	2300	Revenues (\$mil)	2700
192.8	197.5	210	230	Net Profit (\$mil)	300
35.8%	37.5%	37.5%	37.5%	Income Tax Rate	37.5%
9.9%	9.8%	9.8%	10.0%	Net Profit Margin	11.2%
71.6%	68.0%	58.5%	56.0%	Long-Term Debt Ratio	48.0%
28.4%	34.0%	40.5%	43.5%	Common Equity Ratio	52.0%
1832.7	1754.1	1925	2035	Total Capital (\$mil)	2400
1597.0	1716.8	1910	2090	Net Plant (\$mil)	2585
14.4%	13.6%	13.0%	13.5%	Return on Total Cap'l	14.5%
41.6%	33.1%	27.0%	28.0%	Return on Shr. Equity	24.0%
41.6%	33.1%	27.0%	28.0%	Return on Com Equity	24.0%
20.0%	15.9%	11.5%	12.5%	Retained to Com Eq	14.0%
.52%	52%	57%	52%	All Div'ds to Net Prof	41%

(I-SNET) in '94, '97 revs.: local, 35%; intrastate toll, 11%; network access, 21%; interstate/int'l, 7%; wireless, 11%; other, 15%. '97 deprec. rate: 7.7%; est. plant age 8.5 yrs. Offs. & dirs. own less than 1% of common; Sprint, 6.3% (3/98 proxy). Has 9,750 emplys., 47,787 shrlhlds. Chrmn. & C.E.O.: D.J. Miglio. Incn.: CT. Addr.: 227 Church St., New Haven, CT 06508. Tel.: 203-771-5200.

Federal regulators should soon decide on SBC Comm.'s intended acquisition of Southern New England Telecom. On August 5th, the Connecticut Department of Public Utility Control (DPUC) sanctioned the \$5 billion deal. Fortunately, the state regulators did not follow an attorney general's recommendation for sizable rate reductions. The two companies hope to win Federal Communications Commission approval shortly. As per the deal, SNET common stockholders would receive 1.7568 common shares in SBC for each share held. SNET will provide SBC expanded long-distance, local, Internet, wireless, and cable-TV offerings within an economically strong service area. Competition continues to intensify inside the company's service territory. As of June 30th, more than 40 local exchange carriers, having secured DPUC authorization, were competing with SNET for customers in Connecticut. In connection with SNET's plan to restructure itself into two divisions, one serving the wholesale sector and the other serving retail accounts, the DPUC will supervise customers' selection of alternative service

providers in mid-1999. The wholesale unit will act as a reseller of local phone service to competitors (e.g., AT&T). The retail house will essentially be unregulated, offering long-distance and local service. Management has attempted to sign up existing long-distance customers for local service; those who buy the service now would not be eligible to participate in the upcoming vote. In the second half of 1999, SNET's cost to retain (or add) customers likely will rise. We expect revenue growth to slow, but cost controls should support solid share-net advances. Next month, the DPUC will rule on the implementation of the telco's restructuring plan.

SNET shares are trading close to a 52-week high, reflecting improved prospects for the acquisition. We advise investors to sell their stakes, locking in gains realized since the deal's announcement. On a stand-alone basis, SNET shares offer sub-par total returns to 2001-2003, as does SBC stock. (Note: We've cut SNET's '98 and '99 share-net estimates by \$0.10 and \$0.05, respectively, given increases in the exercise of employee stock options.)

David M. Reimer *October 9, 1998*

<p>(A) Based on diluted shs. outstanding. Excludes nonrecurring gain (losses): '89, 31; '90, (40); '91, (43); '92, (44); '93, (33); '94, (50); '95, '96, '97, (66); '98, net 13. Excludes</p>	<p>loss from discontinued operations: '92, (8). Next earnings report due late Oct. (B) Next div'd meeting about Dec. 10. Goes ex about Dec. 18. Dividend payment dates about the</p>	<p>15th of January, April, July, and October. = Dividend reinvestment plan available. (C) In millions, adjusted for stock split. Timeliness rank suspended due to pending acquisition.</p>
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Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	25
Earnings Predictability	95

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TELEPHONE&DATA SYS. ASE-TDS										RECENT PRICE	35	P/E RATIO NMF (Trailing NMF Median: 54.0)	RELATIVE P/E RATIO NMF	DIV YLD	1.3%	VALUE LINE	761											
TIMELINESS	4	Raised 9/19/97	High: 17.6	27.8	48.5	48.0	40.4	41.3	57.0	51.5	48.3	48.9	49.9	50.1		Target Price	Range											
SAFETY	3	New 7/27/90	Low: 8.2	11.2	26.9	21.8	28.5	30.1	33.3	35.5	35.6	34.8	34.5	30.9		2001	2002											
TECHNICAL	4	Lowered 9/4/98	LEGENDS																									
BETA .85 (1.00 = Market)			7.0 x "Cash Flow" p sh																									
2001-03 PROJECTIONS			Relative Price Strength																									
Price	Gain		3-for-2 split 3/98																									
High	80 (+130%)		3-for-2 split 12/98																									
Low	55 (+55%)		Options: Yes																									
Insider Decisions			Shaded area indicates recession																									
Institutional Decisions																												
to Buy	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																											
Options	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																											
to Sell	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																											
Percent shares traded	8.0																											
to Buy	74																											
to Sell	48																											
Net Buy/Sell	40510																											
309675	37851																											
1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	VALUE LINE PUB. INC.	01-03									
4.36	5.32	5.00	5.85	7.14	7.54	7.92	8.11	9.72	10.13	11.06	11.72	13.28	16.44	19.89	24.17	29.35	34.65	Revenues per sh	53.35									
1.18	1.44	1.48	1.73	1.98	2.12	2.17	2.14	2.93	2.75	2.93	3.12	3.81	4.48	4.81	4.51	5.05	7.00	"Cash Flow" per sh	11.10									
.44	.41	.45	.41	.42	.47	.40	.35	.86	.59	.55	.63	.92	1.07	1.02	d.45	d1.00	.40	Earnings per sh A	2.75									
.14	.16	.18	.20	.21	.23	.24	.26	.28	.30	.32	.34	.36	.38	.40	.42	.44	.46	Div'ds Decl'd per sh B	.52									
3.11	2.80	2.32	2.43	2.20	2.42	2.50	2.68	3.38	4.34	3.60	3.94	5.84	6.31	9.01	12.92	10.50	7.10	Cap'l Spending per sh	5.85									
3.71	3.98	4.08	4.28	4.83	5.89	7.81	12.00	14.17	18.46	21.27	24.30	26.77	29.01	33.29	32.33	28.40	28.70	Book Value per sh	31.85									
16.18	16.47	19.86	20.35	21.69	23.15	24.79	29.57	30.32	34.96	41.25	50.38	55.03	58.06	61.06	60.87	62.00	63.50	Common Shs Outst'g C	67.50									
9.2	14.9	10.0	11.5	18.6	25.5	46.3	NMF	38.7	56.4	64.8	70.2	46.8	38.1	41.1	NMF	NMF	NMF	Avg Ann'l P/E Ratio	24.0									
1.01	1.26	.93	.93	1.26	1.71	3.84	NMF	2.87	3.60	3.93	4.15	3.07	2.55	2.57	NMF	NMF	NMF	Relative P/E Ratio	1.70									
3.4%	2.6%	4.0%	4.1%	2.8%	1.9%	1.3%	.7%	.8%	.9%	.9%	.8%	.8%	.9%	1.0%	1.0%	1.0%	1.0%	Avg Ann'l Div'd Yield	.8%									
CAPITAL STRUCTURE as of 6/30/98										196.3	239.7	294.6	354.0	458.1	590.7	730.8	854.4	1214.8	1471.5	1820	2200	Revenues (\$mill)	3600					
Total Debt \$1841.8 mill. Due in 5 Yrs \$495.0 mill.										10.6	11.1	27.2	21.1	23.8	32.2	52.1	63.4	63.8	d25.5	d80.0	27.5	27.5	Net Profit (\$mill)	185				
LT Debt \$1313.6 mill. LT Interest \$54.0 mill.										40.8%	41.8%	37.6%	41.4%	38.8%	42.9%	44.4%	35.6%	43.6%	NMF	NMF	45.0%	45.0%	Income Tax Rate	45.0%				
Pension Liability None—No defined benefit plan										5.4%	4.6%	9.2%	6.0%	5.2%	5.5%	7.1%	6.6%	5.2%	NMF	NMF	4.0%	4.0%	Net Profit Margin	5.2%				
Pfd Stock \$29.0 mill. Pfd Div'd \$1.0 mill.										50.3%	39.0%	34.5%	32.2%	27.8%	25.7%	23.1%	29.6%	28.3%	34.4%	40.5%	40.0%	40.0%	Long-Term Debt Ratio	38.0%				
Incl. 29 different series of redeemable and non-redeemable, with rates of 5%-9% and \$44.8 liq. value. Portion of pfd. stock is conv't. into approx. 2,245,000 shs.										41.4%	54.1%	58.1%	54.6%	80.2%	61.1%	63.4%	58.0%	58.5%	53.5%	54.5%	54.7%	54.7%	Common Equity Ratio	58.5%				
Common Stock 61,030,724 shs.										467.2	655.6	739.6	1182.0	1456.7	2004.7	2324.9	2903.1	3476.8	3680.1	3345	3330	3330	Total Capital (\$mill)	3625				
(Includes 6,942,975 Series A com. shs.)										379.2	463.1	624.5	997.2	1275.5	1738.3	2153.6	2471.8	1828.9	2465.7	2550	2625	2625	Net Plant (\$mill)	2325				
as of 7/31/98										4.6%	3.4%	5.1%	3.2%	3.0%	2.8%	3.4%	3.3%	2.8%	.6%	NMF	2.0%	2.0%	Return on Total Cap'l	6.0%				
MARKET CAP: \$2.1 billion (Mid Cap)										5.0%	3.0%	6.1%	3.1%	2.6%	2.5%	3.4%	3.7%	3.1%	NMF	NMF	1.5%	1.5%	Return on Shr. Equity	8.0%				
CURRENT POSITION										5.0%	2.8%	6.1%	3.0%	2.5%	2.4%	3.3%	3.5%	3.0%	NMF	NMF	1.5%	1.5%	Return on Com Equity	8.0%				
1996										2.0%	1.1%	3.6%	1.5%	1.1%	1.1%	2.0%	2.2%	1.8%	NMF	NMF	NMF	NMF	Retained to Com Eq	7.0%				
1997										64%	66%	43%	53%	58%	58%	40%	38%	41%	NMF	NMF	NMF	NMF	All Div'ds to Net Prof	17%				
6/30/98										BUSINESS: Telephone & Data Systems, Inc. is a telecommunications company that serves about 471,000 access lines in mostly rural areas of 28 states. Telephone operations provided 30% of '97 revenues. Other subs. include 82%-owned American Paging (8% of revenues), 81%-owned U.S. Cellular (80% of revs.), and 83%-owned Aerial Communications (4% of revs.). 1997 depr. rate: 8.6%.										Roughly 6,400 employees, 3,950 shareholders. Officers & Directors control about 94% of Series A common shares (and 53% of voting power). The Equitable Companies, 22.1% of common shs. (not Series A), (4/98 Proxy). President/CEO: L.T. Carlson, Jr. Inc.: IA. Address: 30 N. LaSalle St., Suite 4000, Chicago, IL 60602. Telephone: 312-630-1900. Internet Address: www.telds.com.								
Fix. Chg. Cov.										302%	NMF	NMF	Telephone & Data Systems is still in the doldrums ... During the second quarter, the company posted an operating loss of \$0.32, which was well below our estimate and the Wall Street consensus. This lackluster performance is attributable to the combined effects of higher-than-anticipated personal communications services (PCS) development expenses associated with its Aerial Communications (AERL: 82%-owned) subsidiary, as well as higher-than-expected costs related to TDS Telecom's new product offerings: ... and will probably remain there for the balance of 1998. Indeed, we look for the company's near-term fortunes to continue to be negatively impacted by hefty start-up and depreciation costs resulting from the buildout of its PCS offering. In addition, TDS will have to boost its PCS promotional and advertising costs, so as to match a healthy increase in such spending by many of its rivals. Therefore, we have pared our 1998 share net estimate by \$0.45, to a loss of \$1.00 a share. The company's restructuring plan is not going too well. Early in the second quarter, TDS shareholders approved a corporate restructuring which would create tracking stocks for Aerial Communications, U.S. Cellular (USM: 81%-owned), and TDS Telecommunications. The special committee appointed at Aerial Communications has rejected the proposal, yet is willing to consider a revised version which "preserves Aerial's inherent value". Separately, U.S. Cellular's special committee is still reviewing the proposal. As a result, we have no guidance as to when, or if, the transaction will take place. Yet, we remain optimistic on TDS' prospects 3 to 5 years hence. U.S. Cellular achieved a market penetration rate of 8.0%, and we see more room for improvement, as the company continues to focus on cost containment. What's more, USM's sale and earnings figures should benefit as the company gains efficiencies and scale from its larger subscriber base. These shares are ranked to lag the broader market over the next year. However, this equity's appreciation potential through the first few years of the new century is well above the Value Line median, based on our projections.										Kenneth A. Nugent				October 9, 1998	
ANNUAL RATES										Post 10 Yrs.	Post 5 Yrs.	Est'd '95-'97 to '01-'03	Corporate restructuring which would create tracking stocks for Aerial Communications, U.S. Cellular (USM: 81%-owned), and TDS Telecommunications. The special committee appointed at Aerial Communications has rejected the proposal, yet is willing to consider a revised version which "preserves Aerial's inherent value". Separately, U.S. Cellular's special committee is still reviewing the proposal. As a result, we have no guidance as to when, or if, the transaction will take place. Yet, we remain optimistic on TDS' prospects 3 to 5 years hence. U.S. Cellular achieved a market penetration rate of 8.0%, and we see more room for improvement, as the company continues to focus on cost containment. What's more, USM's sale and earnings figures should benefit as the company gains efficiencies and scale from its larger subscriber base. These shares are ranked to lag the broader market over the next year. However, this equity's appreciation potential through the first few years of the new century is well above the Value Line median, based on our projections.										Kenneth A. Nugent				October 9, 1998	
of change (per sh)										11.5%	14.5%	17.5%	Yet, we remain optimistic on TDS' prospects 3 to 5 years hence. U.S. Cellular achieved a market penetration rate of 8.0%, and we see more room for improvement, as the company continues to focus on cost containment. What's more, USM's sale and earnings figures should benefit as the company gains efficiencies and scale from its larger subscriber base. These shares are ranked to lag the broader market over the next year. However, this equity's appreciation potential through the first few years of the new century is well above the Value Line median, based on our projections.										Kenneth A. Nugent				October 9, 1998	
Revenues										9.0%	10.0%	16.0%	These shares are ranked to lag the broader market over the next year. However, this equity's appreciation potential through the first few years of the new century is well above the Value Line median, based on our projections.										Kenneth A. Nugent				October 9, 1998	
"Cash Flow"										2.0%	-4.0%	31.0%	However, this equity's appreciation potential through the first few years of the new century is well above the Value Line median, based on our projections.										Kenneth A. Nugent				October 9, 1998	
Earnings										6.5%	6.0%	4.5%	Kenneth A. Nugent										October 9, 1998					
Dividends										20.0%	12.0%	Nil	October 9, 1998															
Book Value										October 9, 1998																		
QUARTERLY REVENUES (\$ mill.)										Full Year	October 9, 1998																	
Cal-ender										Mar.31	Jun.30	Sep.30	Dec.31	October 9, 1998														
1995										210.0	232.1	256.5	255.8	954.4	October 9, 1998													
1996										263.4	299.0	315.9	336.3	1214.6	October 9, 1998													
1997										314.7	356.4	388.1	412.3	1471.5	October 9, 1998													
1998										392.1	451.9	470	506	1820	October 9, 1998													
1999										490	545	555	610	2200	October 9, 1998													
EARNINGS PER SHARE A										Full Year	October 9, 1998																	
Cal-ender										Mar.31	Jun.30	Sep.30	Dec.31	October 9, 1998														
1995										.24	.23	.36	.24	1.07	October 9, 1998													
1996										.22	.31	.31	.18	1.02	October 9, 1998													
1997										.15	.04	..	d.64	d.45	October 9, 1998													
1998										d.64	d.32	d.03	d.01	d1.00	October 9, 1998													
1999										.09	.10	.15	.06	.40	October 9, 1998													
QUARTERLY DIVIDENDS PAID B										Full Year	October 9, 1998																	
Cal-ender										Mar.31	Jun.30	Sep.30	Dec.31	October 9, 1998														
1994										.09	.09	.09	.09	.36	October 9, 1998													
1995										.095	.095	.095	.095	.38	October 9, 1998													
1996										.10	.10	.10	.10	.40	October 9, 1998													
1997										.105	.105	.105	.105	.42	October 9, 1998													
1998										.11	.11	.11			October 9, 1998													

U S WEST, INC. NYSE-USW

RECENT PRICE

53

P/E RATIO

17.4

(Trailing: 19.5
Median: NMF)

RELATIVE P/E RATIO

1.17

DIV YLD

4.0%

VALUE LINE

763

TIMELINESS 3 New 10/10/97
SAFETY 1 Raised 4/10/98
TECHNICAL 3 Lowered 8/21/98
BETA .70 (1.00 = Market)

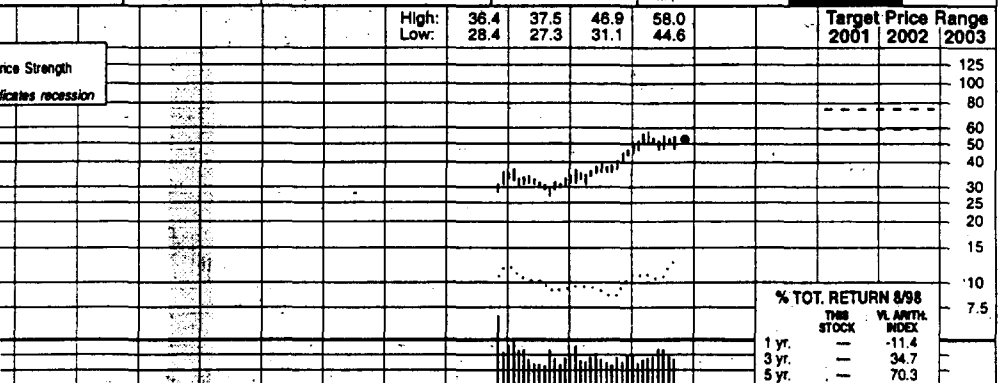
LEGENDS
..... Relative Price Strength
Options: Yes
Shaded area indicates recession

2001-03 PROJECTIONS
Ann'l Total
Price Gain Return
High 75 (+40%) 12%
Low 60 (+15%) 7%

Insider Decisions
N D J F M A M J J
to Buy 0 0 0 0 0 0 0 0
Options 0 3 2 1 2 0 1 0
to Sell 0 0 1 1 0 0 0 0

Institutional Decisions
4Q1997 1Q1998 2Q1998
to Buy 248 231 321
to Sell 176 226 220
Htr (000) 275824 282561 279787

Percent
shares 6.0
traded 4.0
2.0



On January 1, 1984, AT&T was broken up into the "new" AT&T and seven Regional Bell Operating Companies (RBOCs). Included among the RBOCs is U S West, Inc. On November 1, 1995, each share of U S West, Inc.'s stock was divided into one share of U S West Communications Group Common Stock and one share of U S West Media Group Common Stock (now MediaOne). On June 12, 1998, the Communications Group was renamed U S WEST, Inc., and had transferred to it (from MediaOne) the directory business known as Dex.

CAPITAL STRUCTURE as of 6/30/98
Total Debt \$10699 mill. Due in 5 Yrs \$300.0 mill.
LT Debt \$7946 mill. LT Interest \$500 mill.
(LT interest earned: 5.9%; total interest coverage: 4.8x)
Leases, Uncapitalized Annual rentals \$194.0 mill.

Pension Liability None
Prd Stock None

Common Stock 501.7 million shares
MARKET CAP: \$26.6 billion (Large Cap)

CURRENT POSITION	1996	1997	6/30/98
(\$MILL.)			
Cash Assets	80.0	27.0	730.0
Other	2002.0	2155.0	2486.0
Current Assets	2082.0	2182.0	3216.0
Accts Payable	998.0	1325.0	1187.0
Debt Due	834.0	716.0	2753.0
Other	1619.0	1959.0	2050.0
Current Liab.	3451.0	4000.0	5990.0
Fix. Chg. Cov.	526%	548%	628%

ANNUAL RATES	Past 10 Yrs.	Past 5 Yrs.	Est'd '95-'97 to '01-'03
of change (per sh)			
Revenues	7.0%	7.0%	7.0%
"Cash Flow"	7.5%	7.5%	7.5%
Earnings	9.0%	9.0%	9.0%
Dividends	N/A	N/A	N/A
Book Value	13.0%	13.0%	13.0%

Cal-endar	QUARTERLY REVENUES (\$ mill.)	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1995	2318 2338 2389 2439	9484.0
1996	2465 2500 2515 2599	10079
1997	2587 2543 2673 2516	10319
1998	2710 3053 3205 3332	12300
1999	3200 3220 3280 3350	13050

Cal-endar	EARNINGS PER SHARE A	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1995	.59 .60 .59 .57	2.35
1996	.61 .61 .59 .63	2.44
1997	.68 .64 .66 .59	2.57
1998	.78 .76 .74 .72	3.00
1999	.83 .80 .80 .77	3.20

Cal-endar	QUARTERLY DIVIDENDS PAID B	Full Year
	Mar.31 Jun.30 Sep.30 Dec.31	
1994	.535 .535 .535 .535	2.14
1995	.535 .535 .535 .535	2.14
1996	.535 .535 .535 .535	2.14
1997	.535 .535 .535 .535	2.14
1998	.535 .535 .535 .535	2.14

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	VALUE LINE PUB., INC.	01-03
Revenues per sh	19.55	20.02	20.98	21.27	24.55	26.05	26.05	26.05	26.05	26.05	26.05	26.05	31.05	31.05
"Cash Flow" per sh	6.41	6.65	6.80	6.55	7.30	7.80	7.80	7.80	7.80	7.80	7.80	7.80	10.15	10.15
Earnings per sh A	2.42	2.35	2.44	2.57	3.00	3.20	3.20	3.20	3.20	3.20	3.20	3.20	4.15	4.15
Div'ds Decl'd per sh B	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.20	2.20
Cap'l Spending per sh	4.80	5.20	5.03	4.41	5.60	5.70	5.70	5.70	5.70	5.70	5.70	5.70	6.20	6.20
Book Value per sh	6.77	7.34	8.15	8.66	10.95	12.00	12.00	12.00	12.00	12.00	12.00	12.00	16.70	16.70
Common Shs Outst'g C	469.34	473.64	480.46	485.06	501.00	501.00	501.00	501.00	501.00	501.00	501.00	501.00	500.00	500.00
Avg Ann'l P/E Ratio	13.6	13.1	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	16.0	16.0
Relative P/E Ratio	.91	.82	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	1.15	1.15
Avg Ann'l Div'd Yield	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	3.3%	3.3%
Revenues (\$mill)	9176.0	9484.0	10079	10319	12300	13050	13050	13050	13050	13050	13050	13050	15530	15530
Net Profit (\$mill)	1099.0	1107.0	1164.0	1050.0	1515	1615	1615	1615	1615	1615	1615	1615	2085	2085
Income Tax Rate	36.1%	35.7%	36.5%	39.4%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%
Net Profit Margin	12.0%	11.7%	11.5%	10.2%	12.3%	12.4%	12.4%	12.4%	12.4%	12.4%	12.4%	12.4%	13.5%	13.5%
Long-Term Debt Ratio	58.7%	62.1%	59.1%	54.5%	62.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	59.0%	47.0%	47.0%
Common Equity Ratio	41.3%	37.9%	40.9%	45.5%	38.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	41.0%	53.0%	53.0%
Total Capital (\$mill)	7895.0	9165.0	9581.0	9219.0	14385	14520	14520	14520	14520	14520	14520	14520	15640	15640
Net Plant (\$mill)	13041	13529	14006	14232	14820	15430	15430	15430	15430	15430	15430	15430	16170	16170
Return on Total Cap'l	16.1%	14.1%	14.2%	13.5%	12.5%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	15.0%	15.0%
Return on Shr. Equity	34.6%	31.8%	29.7%	25.0%	27.5%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	25.0%	25.0%
Return on Com Equity	34.6%	31.8%	29.7%	25.0%	27.5%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	27.0%	25.0%	25.0%
Retained to Com Eq	6.7%	5.2%	5.7%	NMF	8.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	11.5%	11.5%
All Div'ds to Net Prof	81%	84%	81%	NMF	71%	67%	67%	67%	67%	67%	67%	67%	53%	53%

BUSINESS: U S WEST, Inc. provides local exchange telephone service; exchange access service; and long-distance network services (within its Local Access and Transport Areas [LATAs]) to customers in Arizona, Colorado, Idaho, Iowa, Minn., Mont., Nebraska, New Mex., N. Dakota, Oregon, S. Dakota, Utah, Wash. and Wyoming. Access lines in service: 16.0 million. Access lines per Telco

employee: 366. '97 revenue breakdown: local service, 49%; toll, 8%; access charges, 33%; other, 10%. '97 depreciation rate: 6.3%. Estimated plant age: 9 yrs. Has about 52,600 employees, 870,000 shareholders (4/98 proxy). President & C.E.O.: Sol Trujillo, Inc., Colorado. Address: 1801 California Street, Suite 5200, Denver, CO 80202. Telephone: 1-800-879-4357. Internet: www.uswest.com

U S WEST's traditional, local exchange telephone business is sound. A strong economy and the ongoing proliferation of home computers should sustain the continued 4% growth in total access lines in use that we project for the foreseeable future. This increase will likely lead to local service revenue gains in the high single digits, for all of 1998. In particular, through mid-year, so called "second line" installations—typically those used to accommodate modems—rose by more than 20%, and we expect this trend to continue into 1999. Further, although penetration rates of popular ancillary phone services, such as Caller ID (33%) and Voice Messaging (tops in the industry, at 18%), remain quite high, there's still ample room to grow. On a negative note, increasing competition and rate reductions, especially in Washington state, should continue to hurt USW's long distance network services (7% of total revenues).

Yellow Pages publishing is once again a part of U S WEST. In June, USW "reacquired" the directory publisher, Dex, from MediaOne. (When the "old" U S West was split in 1995, the Dex operations were

assigned to MediaOne, then known as U S West Media Group.) Increased advertising volume, as well as more expensive, elaborate ads, have produced 6% revenue gains for Dex, year over year, through June. (Note: Dex has contributed \$0.13 to year-to-date share net and our pro forma \$3.00 a share, 1998 earnings estimate assumes ownership of Dex from January 1st.) Longer term, U S WEST is focused on the Internet and wireless services. The company's high-speed, digital data service, *MegaBit*, permits users to access the Net while making or receiving phone calls over the same line. *MegaBit's* long-term profit potential is high, but it should dilute earnings mildly this year and next. Similarly, USW's *Advanced PCS* service probably won't provide profits for four years (due to start-up costs), but here, too, the long-run potential is vast. This product links a customer's home telephone and PCS numbers, so no second number is needed. Telecom merger mania has discounted much of the stock's gains potential. But its 4% dividend yield is attractive in the current interest rate environment.

Todd A. Schwartzman October 9, 1998

(A) Primary earnings through 1996, then diluted. Excludes net nonrecurring items: '94, 11c; '95, 17c; '96, 15c; '97, 10c. Next earnings report due late Oct.

(B) Next div'd meeting about Dec. 5th. Next ex date Jan. 8th. Div'd payment dates: 1st of Feb., May, Aug., Nov. = Dividend reinvestment plan available.

(C) In millions.
(D) Pro forma.

Company's Financial Strength	A+
Stock's Price Stability	80
Price Growth Persistence	NMF
Earnings Predictability	NMF

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Index to Stocks

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PAGE NUMBERS

Bold type refers to Ratings and Reports; italics to Selection & Opinion

PAGE NUMBERS			Timeliness		Rank for Safety				Industry Rank				Technical Rank				Where Options Trade		
Bold type refers to Ratings and Reports; italics to Selection & Opinion			Recent Price		Beta	Estimated Range of 3-5 yr. average prices 2000-2002	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. to 6-30-98	(f) Est'd Div'd next 12 mos.	LATEST RESULTS								
NAME OF STOCK	Ticker Symbol		Qtr. Ended	Earnings Per sh.							Year Ago	Qtr. Ended	Latest Div'd	Year Ago					
553 AAR Corp.	AIR	39	2	3	.70	40-60	(5-55%)	21.1	1.2	1.85	.48	41	11/30	.46	.32	12/31	.12	.12	3 PHL
1002 ABB AB ADR(+) (NDQ)	ABBBY	12	4	2	.80	13-18	(10-50%)	21.4	1.9	.56	.23	75	6/30	.15	.15	12/31	NIL	NIL	3
334 ABM Industries Inc.	ABM	31	3	3	.65	30-45	(N-45%)	22.8	1.5	1.36	.48	15	10/31	.40	.33	3/31	▲.12	.10	3
852 ABT Building	ABTC	18	4	4	.80	20-30	(10-65%)	8.9	NIL	2.02	NIL	65	9/30	.46	.60	12/31	NIL	NIL	4
603 ACE Limited	ACL	94	2	3	.90	100-145	(5-55%)	13.4	1.0	6.99	.96	62	9/30	2.24	1.46	3/31	▲.24	.18	2 PAC
974 ACM Gov't Income Fund	ACG	11	4	1	.60	13-15	(20-35%)	NMF	8.2	NMF	.90	79	6/30	10.41(q)	9.33(q)	12/31	.225	.225	4
773 ADC Telecom. (NDQ)	ADCT	43	1	3	1.55	50-80	(15-85%)	37.4	NIL	1.15	NIL	5	10/31	.28	.22	12/31	NIL	NIL	2 PAC
1896 AES Corp.	AES	47	2	3	.80	40-60	(N-30%)	38.2	NIL	1.23	NIL	70	9/30	.28	.21	12/31	NIL	NIL	2
1195 AFLAC Inc.	AFL	51	3	3	1.00	60-90	(20-75%)	18.5	1.0	2.76	.50	32	9/30	.88	.62	12/31	.115	.10	3 ASE
1302 AGCO Corp.	AG	29	3	4	1.15	45-75	(55-100%)	9.8	0.1	2.96	.04	64	9/30	.70	.54	12/31	.01	.01	3 PAC
467 AGL Resources	ATG	21	5	2	.75	20-30	(N-45%)	16.0	5.4	1.31	1.14	86	9/30	d.07	d.04	12/31	.27	.27	4
1395 AK Steel Holding	AKS	18	4	3	.75	25-35	(40-85%)	7.8	2.8	2.37	.50	81	9/30	.80	.64	12/31	.125	.10	3
262 AMR Corp.	AMR	126	2	3	1.10	110-170	(N-35%)	11.9	NIL	11.44	NIL	4	9/30	3.66	3.06	12/31	NIL	NIL	3 ASE
1754 APL Limited	APL		SEE FINAL SUPPLEMENT - PAGE 1754																
1756 113 APS Holding 'A' (NDQ)	APSI	2 1/4	▼	4	5	1.05	5-10 (110-315%)	NMF	NIL	d.92	NIL	77	10/31	d.38	.44	12/31	NIL	NIL	5
1236 ARCO Chemical	RCM	47	4	1	.75	60-70	(30-60%)	16.5	6.0	2.84	2.80	67	9/30	.82	1.00	12/31	.70	.70	4 ASE
263 ASA Holdings (NDQ)	ASA	29	3	3	1.25	40-55	(40-90%)	14.2	1.5	2.04	.44	4	9/30	.51	.53	12/31	.10	.095	2 CBO
2181 ASA Ltd.	ASA	21	4	3	.80	30-45	(45-115%)	NMF	5.7	NMF	1.20	86	8/31	27.39(q)	NIL(q)	12/31	.30	.30	5 ASE
532 741 AT&T Corp.	T	63	-	2	NMF	55-75	(N-20%)	22.1	2.1	2.85	1.32	40	9/30	.71	.84	3/31	.33	.33	- CBO
199 ATL Ultrasound (NDQ)	ATLI	46	3	3	1.05	60-90	(30-85%)	28.9	NIL	1.59	NIL	34	9/30	d.14	.25	12/31	NIL	NIL	2 PHL
200 Abbott Labs.	ABT	67	3	2	1.05	75-100	(10-50%)	23.5	1.7	2.85	1.17	34	9/30	.61	.54	3/31	.27	.24	3 PHL
914 Abitibi-Consolidated	ABY	14	-	3	1.00	20-30	(45-115%)	18.4	2.1	.78	.30	89	9/30	.05	.15	3/31	.074	.074	- CBO
1756 2193 Acclaim Entertainment (NDQ)	AKLM	3 1/4	3	5	1.55	8-14	(115-280%)	NMF	NIL	d.10	NIL	10	8/31	d.09	d.16	12/31	NIL	NIL	3 CBO
335 AccuStaff Inc.	ASI	23	1	4	1.40	35-55	(50-140%)	20.0	NIL	1.15	NIL	15	9/30	.27	.17	12/31	NIL	NIL	1 CBO
1396 Acme Metals	AMI	10	4	3	.80	30-40	(200-300%)	NMF	NIL	d.14	NIL	81	9/30	d.91	.25	12/31	NIL	NIL	4
201 Acuson Corp.	ACN	17	3	3	1.10	35-50	(105-195%)	20.5	NIL	.83	NIL	34	9/30	.15	.06	12/31	NIL	NIL	4 PAC
2182 Adams Express	ADX	24	3	2	.75	30-40	(25-65%)	NMF	2.2	NMF	.52	86	9/30	28.48(q)	23.81(q)	12/31	.17	.19	3
1081 Adaptec Inc. (NDQ)	ADPT	38	1	3	1.65	65-95	(70-150%)	16.2	NIL	2.34	NIL	7	9/30	.53	.39	12/31	NIL	NIL	3 ASE
2194 Adobe Systems (NDQ)	ADBE	40	3	3	1.25	75-115	(90-180%)	18.0	0.5	2.22	.20	10	11/30	.86	.91	12/31	.05	.05	3 PAC
1053 Advanced Micro Dev.	AMD	17	4	3	1.45	40-65	(135-280%)	43.6	NIL	.39	NIL	28	9/30	d.22	d.25	12/31	NIL	NIL	5 PAC
2139 ADVANTA Corp. 'A' (NDQ)	ADVNA	26	-	3	1.50	45-65	(75-150%)	7.6	2.0	3.41	.52	13	9/30	.82	.98	12/31	.11	.11	- CBO
1411 Advest Group	ADV	25	2	3	1.25	20-30	(N-20%)	14.5	0.8	1.73	.16	3	9/30	.48	.24	3/31	▲.04	NIL	1
1851 ADVO, Inc.	AD	20	-	4	NMF	25-40	(25-100%)	14.8	NIL	1.35	NIL	19	9/30	.35	.29	12/31	NIL	NIL	-
1194 AEGON Ins. Group	AEG	90	3	3	.75	95-115	(5-30%)	22.8	1.9	3.95	1.75	32	6/30	.86	.84	12/31	NIL	NIL	3
1303 Aeroquip-Vickers	ANV	48	3	3	.90	55-80	(15-65%)	11.2	1.7	4.30	.80	64	9/30	1.96	.72	12/31	.20	.20	2 PHL
650 Aetna Inc.	AET	70	4	3	1.05	120-185	(70-185%)	17.7	1.2	3.95	.82	30	9/30	.98	1.01	3/31	.20	.20	3 ASE
1162 Ahmanson (H.F.)	AHM	67	2	3	1.35	65-95	(N-40%)	18.3	1.3	3.67	.88	16	9/30	.84	.49	12/31	.22	.22	2 ASE
1506 Ahold ADR	AHO	26	-	3	NMF	25-35	(N-35%)	27.1	1.3	.96	.35	71	6/30	.21	.13	12/31	.106	.094	-
264 Air Express Int'l (NDQ)	AEIC	28	2	3	1.00	35-55	(25-85%)	18.1	0.7	1.55	.20	4	9/30	.38	.31	3/31	.05	.04	2
1900 Air Products & Chem.	APD	82	3	2	1.00	90-120	(10-45%)	19.2	1.5	4.28	1.22	87	9/30	.98	.85	3/31	.30	.275	3 PHL

★ Supplementary Report in this week's edition.

▲ Arrow indicates the direction of a change. When it appears with the Latest Dividend, the arrow signals that a change in the regular payment rate has occurred in the latest quarter.

For Timeliness, Estimated Range of 3- to 5-year average prices 2000-2002, or Estimated Earnings 12 months to 6-30-98, the arrow indicates a change since the preceding week. When a diamond ♦ (indicating a new figure) appears alongside the latest

quarterly earnings results, the rank change probably was primarily caused by the earnings report. In other cases, the change is due to the dynamics of the ranking system and could simply be the result of the improvement or weakening of other stocks.

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PAGE NUMBERS		Timeliness		Rank for Safety		Industry Rank		Technical Rank										
Bold type refers to Ratings and Reports; italics to Selection & Opinion		Recent Price						LATEST RESULTS										
NAME OF STOCK		Ticker Symbol		Beta	Estimated Range of 3-5 yr. average prices 2000-2002	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. to 6-30-98	Est'd Div'd next 12 mos.	Qtr. Ended	Earnings Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Where Options Trade		
1437	265 Airborne Freight	ABF	62	1 3	1.35	70-110 (15-75%)	12.4	0.5	5.01	.30	4	9/30	1.87	.22	12/31	.075	.075	1 PHL
1438	493 Airgas Inc.	ARG	14	4 3	1.10	25-35 (80-150%)	19.4	NIL	.72	NIL	73	9/30	.16	.17	12/31	NIL	NIL	3 PHL
	742 AirTouch Commun.	ATT	41	1 3	1.30	45-85 (35-105%)	41.4	NIL	.99	NIL	40	9/30	.25	.10	12/31	NIL	NIL	2 CBO
1901	Akzo Nobel NV ADR(g) (NDQ)	AKZOY	87	3 2	.80	105-145 (20-65%)	19.4	2.4	4.48	2.09	87	9/30	1.13	.89	12/31	.637	.439	3
266	Alaska Air Group	ALK	38	1 4	1.05	45-75 (20-95%)	8.6	NIL	4.43	NIL	4	9/30	2.85	2.40	12/31	NIL	NIL	3 ASE
1304	Albany Int'l 'A'	AIN	23	3 3	.75	30-45 (30-95%)	13.6	1.9	1.69	.44	64	9/30	.37	.41	3/31	.105	.10	3
1902	Albemarle Corp.	ALB	25	2 3	.95	30-45 (20-80%)	17.6	1.4	1.42	.36	87	9/30	.33	.13	3/31	.09	.07	2 PAC
831	Alberto Culver 'B'	ACV	33	3 3	.85	30-45 (N-35%)	24.3	0.7	1.36	.22	51	9/30	.36	.32	12/31	.05	.045	4 ASE
1507	Albertson's, Inc.	ABS	48	2 2	.85	45-65 (N-35%)	22.7	1.3	2.11	.64	71	10/31	.50	.42	3/31	.16	.15	3 PHL
1223	Alcan Aluminium	AL	27	4 3	.95	40-60 (50-120%)	10.2	2.3	2.64	.63	69	9/30	.47	.43	12/31	.15	.15	5 ASE
	789 Alcatel Alsthom ADR(g)	ALA	26	3 3	1.00	30-45 (15-75%)	23.6	2.0	1.10	.53	60	6/30	.30(p)	d.02(p)	12/31	NIL	NIL	3 CBO
	294 Alexander & Baldwin (NDQ)	ALEX	27	4 3	.65	35-50 (30-85%)	17.1	3.3	1.58	.88	30	9/30	.48	.51	12/31	.22	.22	4
	743 Alliant Commun.	ALNT	33	2 3	.70	45-55 (N-5%)	21.7	2.1	1.52	.68	40	9/30	.39	.33	3/31	.17	.16	2 PAC
	163 Allegheny Energy	AYE	32	4 1	.75	30-40 (N-25%)	13.7	5.5	2.33	1.76	85	9/30	.61	.46	12/31	.43	.43	5 PAC
★ ★	1346 Allegheny Telecyme	ALT	26	-	3 NMF	25-40 (N-55%)	15.8	2.5	1.65	.64	36	9/30	.35	.26	12/31	.16	.16	-
1434	774 Allen Telecom	ALN	19	2 4	1.55	35-55 (85-190%)	16.4	NIL	1.16	NIL	5	9/30	.29	.23	12/31	NIL	NIL	2 ASE
	202 Allergan, Inc.	AGN	33	4 3	.85	40-60 (20-80%)	21.0	1.7	1.57	.55	34	9/30	.34	.57	12/31	.13	.13	3 PHL
	2140 Alliance Capital Mgmt.	AC	39	2 3	1.15	35-50 (N-30%)	13.3	7.8	2.94	2.96	13	9/30	.76	.57	12/31	.74	.55	3
	574 Allied Products	ADP	24	3 3	.85	30-40 (25-65%)	14.5	0.7	1.65	.16	25	9/30	.40	.35	12/31	.04	.033	3
	359 Allied Waste (NDQ)	AWIN	24	1 4	.80	25-40 (5-65%)	31.2	NIL	.77	NIL	37	9/30	.19	.09	12/31	NIL	NIL	1 CBO
	1347 AlliedSignal Inc.	ALD	39	3 1	1.30	50-60 (30-55%)	17.9	1.3	2.18	.52	36	9/30	.52	.45	12/31	.13	.113	3 PHL
1282	605 Allstate Corp.	ALL	91	2 3	1.15	90-130 (N-45%)	15.7	1.1	5.80	1.02	62	9/30	1.89	.65	3/31	.24	.24	3 ASE
	744 ALLTEL Corp.	AT	41	4 2	.90	40-55 (N-35%)	18.8	2.9	2.18	1.18	40	9/30	.53	.48	3/31	.29	.275	4 PAC
	203 ALPHARMA Inc.	ALO	22	2 4	.65	20-35 (N-60%)	26.8	0.8	.82	.18	34	9/30	.22	NIL	3/31	.045	.045	1 PHL
246	1054 Altera Corp. (NDQ)	ALTR	33	3 4	1.60	60-95 (80-190%)	20.6	NIL	1.60	NIL	23	9/30	.40	.25	12/31	NIL	NIL	3 NYS
	1224 Aluminum Co. of Amer.	AA	70	3 3	.95	80-125 (15-80%)	12.8	2.2	5.49	1.52	69	9/30	1.25	.39	12/31	.25	.333	3 CBO
	1246 ALZA Corp.	AZA	31	3 3	1.20	40-60 (30-95%)	24.2	NIL	1.28	NIL	21	9/30	.31	.27	12/31	NIL	NIL	4 PAC
	2166 Ambac Fin'l Group	ABK	45	3 2	.95	45-60 (0-35%)	13.9	0.8	3.24	.38	57	9/30	.87	.63	12/31	.09	.083	3 PAC
	575 Amcast Industrial	AIZ	23	5 3	.70	35-55 (50-140%)	12.6	2.5	1.83	.58	25	11/30	.44	.48	12/31	.14	.14	4
	403 Amerada Hess	AHC	54	4 3	.80	55-85 (0-55%)	65.9	1.2	.82	.65	72	9/30	.22	.29	3/31	.15	.30	4 PHL
	277 AMERCO (NDQ)	UHAL	25	3 4	1.15	40-65 (60-160%)	11.3	NIL	2.21	NIL	17	9/30	1.54	1.42	12/31	NIL	NIL	3
	604 America Financial	AFC	50	-	3 NMF	45-70 (N-40%)	12.8	0.5	3.92	.24	62	9/30	1.04	.93	3/31	.05	.05	1 ASE
	2195 America Online	AOL	88	3 4	1.75	70-115 (N-30%)	NMF	NIL	.85	NIL	10	9/30	.12	.17	12/31	NIL	NIL	1 ASE
687	2167 Amer. Bankers Ins.	ABI	46	-	3 .95	40-60 (N-30%)	17.7	1.1	2.60	.49	57	9/30	.63	.51	12/31	.11	.10	-
	1119 Amer. Business Prod.	ABP	22	5 3	.90	30-40 (35-80%)	18.3	2.8	1.20	.62	18	9/30	.28	.39	12/31	.155	.145	4
686	164 Amer. Elec. Power	AEP	52	3 2	.70	40-55 (N-5%)	15.1	4.6	3.44	2.40	85	9/30	1.07	.87	12/31	.80	.60	4 CBO
	2141 Amer. Express	AXP	88	3 3	1.30	75-110 (N-25%)	20.3	1.0	4.33	.90	13	9/30	1.10	.95	3/31	.225	.225	3 CBO
	606 Amer. Financial Group	AFG	40	4 3	1.05	35-50 (N-25%)	15.6	2.5	2.57	1.00	62	9/30	.57	3.31	12/31	.25	.25	3 PHL
530	278 Amer. Freightways (NDQ)	AFWY	9%	3 4	.50	19-30 (90-205%)	12.4	NIL	.80	NIL	17	9/30	.25	.10	12/31	NIL	NIL	2
	2168 Amer. General Corp.	AGC	54	4 2	1.15	55-75 (0-40%)	15.7	2.6	3.45	1.40	57	9/30	.91	.82	12/31	.35	.325	3 CBO
	943 Amer. Greetings (NDQ)	AGREA	38	3 3	1.00	35-55 (N-45%)	15.5	1.9	2.45	.74	46	11/30	1.07	1.00	12/31	.18	.17	3
	1247 Amer. Home Products	AHP	77	4 1	.95	85-105 (10-35%)	21.8	2.2	3.54	1.72	21	9/30	.85	.77	12/31	.43	.41	3 ASE
687	2169 Amer. Int'l Group	AIG	110	3 2	1.20	110-150 (0-35%)	22.4	0.3	4.90	.30	57	9/30	1.19	1.04	3/31	.075	.067	3 CBO
	1082 Amer. Power Conv. (NDQ)	APCC	23	1 4	1.20	30-55 (30-140%)	16.4	NIL	1.40	NIL	7	9/30	.38	.30	12/31	NIL	NIL	3 CBO
	1348 Amer. Standard	ASD	38	4 3	1.00	40-60 (5-60%)	13.1	NIL	2.89	NIL	36	9/30	.75	.73	12/31	NIL	NIL	5 CBO
1758	1508 Amer. Stores	ASC	20	5 3	.70	30-40 (50-100%)	13.6	1.8	1.47	.36	71	10/31	.22	.26	3/31	.09	.08	3 CBO
	1404 Amer. Water Works	AWK	27	4 1	.60	25-30 (N-10%)	18.4	2.8	1.47	.76	80	9/30	.54	.45	12/31	.19	.175	4
	204 AmeriSource Health 'A'	AAS	57	-	3 .65	50-75 (N-30%)	22.3	NIL	2.56	NIL	34	9/30	.66	.56	12/31	NIL	NIL	-
1437	745 Ameritech Corp.(e)	AIT	42	3 1	.90	35-45 (N-5%)	18.8	2.9	2.24	1.20	40	9/30	.53	.47	3/31	.30	.282	3 CBO
	853 Ameron Int'l	AMN	64	3 3	.80	70-100 (10-55%)	12.6	2.0	5.07	1.28	65	8/31	1.72	1.50	12/31	.32	.32	3
	1349 Ametek, Inc.	AME	27	-	3 NMF	30-45 (10-65%)	17.0	0.9	1.59	.24	36	9/30	.39	.40	12/31	.06	.06	- PHL
	1248 Amgen (NDQ)	AMGN	53	3 3	1.00	75-110 (40-110%)	18.9	NIL	2.80	NIL	21	9/30	.66	.64	12/31	NIL	NIL	5 ASE
	404 Amoco Corp.	AN	86	4 1	.70	115-140 (35-65%)	16.3	3.4	5.28	2.90	72	9/30	1.30	1.08	12/31	.70	.65	4 CBO
	1022 AMP Inc.	AMP	42	3 1	1.10	70-90 (65-115%)	17.9	2.6	2.35	1.08	27	9/30	.55	.43	12/31	.26	.25	3 CBO
	589 Ampco-Pittsburgh	AP	19	3 3	.75	25-35 (30-85%)	13.7	2.0	1.39	.38	83	9/30	.31	.25	3/31	.09	.16	2
	2102 AmSouth Bancorp.	ASO	55	3 2	1.00	45-60 (N-10%)	19.1	2.2	2.88	1.20	58	9/30	.70	.41	3/31	.30	.28	3 ASE
	1858 Anadarko Petroleum	APC	60	3 3	.75	100-150 (65-150%)	27.0	0.5	2.22	.30	59	9/30	.29	.21	12/31	.075	.075	3 CBO
	1055 Analog Devices	ADI	28	3 3	1.45	35-55 (25-95%)	23.3	NIL	1.20	NIL	28	10/31	.29	.26	12/31	NIL	NIL	2 PHL
	136 Analogic Corp. (NDQ)	ALOG	37	3 3	.95	35-50 (N-35%)	20.0	0.5	1.85	.20	9	10/31	.36	.31	12/31	.05	.05	3
247	1801 Anchor Gaming (NDQ)	SLOT	54	2 3	1.35	100-150 (85-180%)	10.7	NIL	5.06	NIL	24	9/30	1.23	.60	12/31	NIL	NIL	1
	775 Andrew Corp. (NDQ)	ANDW	23	3 3	1.60	40-65 (75-185%)	17.8.											

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PAGE NUMBERS			Timeliness			Rank for Safety					Industry Rank				Technical Rank				Where Options Trade	
Bold type refers to Ratings and Reports; italics to Selection & Opinion			Recent Price		Beta	Estimated Range of 3-5 yr. average prices 2000-2002	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. to 6-30-98	(f) Est'd Div'd next 12 mos.	LATEST RESULTS									
NAME OF STOCK	Ticker Symbol	Price	Qtr. Ended	Earnings Per sh.							Year Ago	Qtr. Ended	Latest Div'd	Year Ago						
279	Arkansas Best	(NDQ) ABFS	9%	2 5	1.10	14-25	(50-165%)	8.2	NIL	1.14	NIL	17	9/30	.37	d.49	12/31	NIL	NIL	1 CBO	
590	Amco Inc.	AS	4%	2 4	1.10	10-18	(110-275%)	8.3	NIL	.58	NIL	83	9/30	.21	.05	12/31	NIL	NIL	2 PHL	
855	Armstrong World Inds.	ACK	74	3 3	1.00	75-110	(0-50%)	13.1	2.5	5.66	1.84	65	9/30	1.44	1.06	12/31	▲.44	.40	4 PHL	
1023	Arrow Electronics	ARW	32	3 3	1.20	40-60	(25-90%)	14.3	NIL	2.24	NIL	27	9/30	.50	.43	12/31	NIL	NIL	3 ASE	
1423	Arrow Int'l	(NDQ) ARRO	37	2 3	.60	40-60	(10-80%)	21.0	0.5	1.76	.20	34	8/31	.42	.35	12/31	.045	.04	3	
6566	814 Arvin Int'l	ARV	33	2 3	.90	40-60	(20-80%)	12.0	2.5	2.74	.82	44	9/30	.58	.37	12/31	▲.20	.19	2 ASE	
1225	Asarco Inc.	AR	23	3 3	1.15	30-40	(30-75%)	16.8	3.5	1.37	.80	94	9/30	.34	.14	12/31	.20	.20	4 ASE	
1085	Ascend Commun.	(NDQ) ASND	24	3 4	1.95	40-65	(65-170%)	20.5	NIL	1.17	NIL	7	9/30	.20	.28	12/31	NIL	NIL	5	
405	Ashland Inc.	ASH	53	3 3	.85	65-95	(25-80%)	15.3	2.1	3.47	1.10	72	9/30	1.06	.64	12/31	.275	.275	3 PHL	
1163	Astoria Financial	(NDQ) ASFC	56	2 3	1.05	55-80	(N-45%)	16.8	1.1	3.34	.60	16	9/30	.81	.65	12/31	.15	.11	3 CBO	
165	Atlantic Energy, Inc.	ATE	21	3 3	.65	16-25	(N-20%)	11.9	7.3	1.77	1.54	85	9/30	.89	.62	12/31	.385	.385	4	
406	Atlantic Richfield	ARC	80	4 1	.70	80-95	(0-20%)	15.6	3.6	5.13	2.90	72	9/30	1.31	1.47	12/31	.713	.688	3 CBO	
1056	Atmel Corp.	(NDQ) ATML	18	3 4	1.65	45-70	(150-290%)	12.4	NIL	1.45	NIL	28	9/30	.30	.53	12/31	NIL	NIL	3 CBO	
468	Atmos Energy	ATO	30	4 3	.55	25-35	(N-15%)	19.0	3.5	1.58	1.06	86	9/30	d.31	d.25	12/31	▲.265	.25	3	
2196	Autodesk, Inc.	(NDQ) ADSK	36	2 3	1.25	50-75	(40-110%)	18.0	0.7	2.00	.24	10	10/31	.41	.15	3/31	.06	.06	2 PAC	
2197	Automatic Data Proc.	AUD	63	3 1	1.00	55-65	(N-5%)	34.2	0.8	1.84	.53	10	9/30	.36	.32	3/31	▲.133	.115	3 PHL	
1682	AutoZone Inc.	AZO	29	1 3	1.10	35-50	(20-70%)	20.1	NIL	1.44	NIL	12	11/30	.31	.25	12/31	NIL	NIL	3 CBO	
494	Avery Dennison	AVY	45	3 2	.80	50-70	(10-55%)	21.6	1.9	2.08	.84	73	9/30	.50	.42	12/31	▲.21	.17	4 PHL	
554	Aviall, Inc.	AVL	15	-	.95	18-30	(20-100%)	10.6	NIL	1.41	NIL	41	9/30	.35	d.01	12/31	NIL	NIL	- PHL	
1024	Avnet, Inc.	AVT	66	3 3	1.20	80-120	(20-80%)	13.9	0.9	4.75	.60	27	9/30	1.02	.97	3/31	.15	.15	4 ASE	
1926	832 Avon Products	AVP	62	4 3	1.00	60-90	(N-45%)	24.4	2.2	2.54	1.36	51	9/30	.52	.47	12/31	.315	.29	3 CBO	
1802	Aztar Corp.	AZR	6%	3 4	.85	7-11	(15-75%)	36.5	NIL	.17	NIL	24	9/30	.07	NIL	12/31	NIL	NIL	4 CBO	
1581	B.A.T. Inds. ADR(g)	(ASE) BTI	19	4 3	.95	30-40	(60-110%)	10.7	6.1	1.78	1.16	63	9/30	.46	.48	12/31	NIL	NIL	4	
1143	2103 BB&T Corp.	BBK	64	3 2	1.10	50-70	(N-10%)	21.8	1.9	2.94	1.24	58	9/30	.45	.50	3/31	.31	.27	2 PHL	
790	BC TELECOM	(TSE) BCT.TO	44	b	3 2	.65	▲45-65	(0-50%)	19.2	3.1	2.29	1.38	60	9/30	.61(b)	.56(b)	3/31	.34(b)	.33(b)	3 TCO
791	BCE Inc.	BCE	34	3 2	.85	35-50	(5-45%)	23.4	3.0	1.45	1.02	60	9/30	.34	.25	3/31	.252	.252	3 PAC	
1872	BJ Services	BJS	69	1 3	.95	120-180	(75-160%)	18.0	NIL	3.84	NIL	1	9/30	.94	.45	12/31	NIL	NIL	2 CBO	
1644	BJ's Wholesale Club	BJ	30	-	3	NMF	35-55	(15-85%)	15.5	NIL	1.94	NIL	14	10/31	.36	.29	12/31	NIL	NIL	-
2196	BMC Software	(NDQ) BMCS	66	1 3	1.30	80-120	(20-80%)	29.9	NIL	2.21	NIL	10	9/30	.45	.33	12/31	NIL	NIL	2 CBO	
NAME CHANGED TO BUILDING MATERIALS HLDG.																				
1176	BRE Properties	BRE	28	3 2	.55	30-40	(5-45%)	18.3	5.0	1.53	1.40	74	9/30	.42	.30	12/31	.345	.33	4	
1873	Baker Hughes	BHI	42	2 3	.95	50-80	(20-90%)	20.7	1.1	2.03	.46	1	9/30	.51	.38	12/31	.115	.115	3 PAC	
1003	Baldor Electric(e)	BEZ	22	3 3	.60	25-40	(15-80%)	19.0	1.8	1.16	.40	75	9/30	.28	.24	3/31	▲.10	.165	3	
945	Ball Corp.	BLL	36	3 3	.70	40-60	(10-65%)	17.0	1.7	2.12	.60	46	9/30	.73	.62	12/31	.15	.15	3 ASE	
205	Ballard Medical	BMP	24	2 3	1.05	30-45	(25-90%)	20.0	0.4	1.20	.10	34	9/30	.28	.24	3/31	.05	.05	3 ASE	
685	166 Balt. Gas & Elec.	BGE	34	3 2	.80	25-35	(N-5%)	14.7	4.9	2.32	1.67	85	9/30	1.11	.93	3/31	.41	.40	4 PAC	
1280	630 Banc One Corp.	ONE	54	4 3	1.30	65-95	(20-75%)	15.7	3.0	3.43	1.60	31	9/30	.73	.81	3/31	.38	.72	3 PAC	
2233	Banco Bilbao Vis. ADR(g)	BBV	32	4 3	.85	30-40	(N-25%)	24.8	2.2	1.29	.70	-	9/30	.30	.30	12/31	.128	.188	2	
2234	Banco Santander ADR(g)	STD	32	3 3	.85	30-45	(N-40%)	20.6	2.5	1.55	.80	-	9/30	.34	.32	12/31	.205	.183	2	
2199	BancTec, Inc.	BTC	27	3 3	.80	30-45	(10-65%)	12.6	NIL	2.14	NIL	10	9/30	.48	.42	12/31	NIL	NIL	3	
123	Bandag, Inc.	BDG	54	5 1	.70	55-70	(0-30%)	15.0	2.0	3.59	1.10	50	9/30	1.04	1.02	3/31	▲.275	.25	4	
1574	Bank of Montreal	(TSE) BMO.TO	64	b	3 2	1.00	65-85	(0-35%)	12.5	2.8	5.10	1.76	33	10/31	1.20(b)	1.10(b)	12/31	▲.44(b)	.40(b)	3 TCO
2104	Bank of New York	BK	57	3 3	1.40	50-75	(N-30%)	19.5	1.8	2.93	1.04	58	9/30	.69	.60	12/31	▲.26	.22	3 CBO	
1575	Bank of Nova Scotia	(TSE) BNS.TO	67	b	3 3	1.00	55-85	(N-25%)	13.1	2.4	5.12	1.60	33	10/31	1.23(b)	1.08(b)	3/31	▲.40(b)	.37(b)	3 TCO
2105	BankAmerica Corp.	BAC	72	2 3	1.45	65-100	(N-40%)	15.6	1.9	4.62	1.36	58	9/30	1.11	.88	12/31	.305	.27	3 CBO	
2106	BankBoston Corp.	BKB	93	3 3	1.30	80-120	(N-30%)	15.0	2.3	6.18	2.10	58	9/30	1.47	1.21	12/31	▲.51	.44	3 PHL	
2107	Bankers Trust NY	BT	113	3 3	1.15	110-160	(N-40%)	13.4	3.5	8.41	4.00	58	9/30	2.16	1.98	3/31	1.00	1.00	3 PAC	
1818	Banta Corp.	(NDQ) BNTA	27	4 3	.80	35-55	(30-105%)	13.5	1.8	2.00	.48	68	9/30	.46	.49	3/31	.12	.11	3 PHL	
206	Bard (C.R.)	BCR	31	4 3	1.10	45-65	(45-110%)	16.3	2.4	1.90	.74	34	9/30	.46	.43	3/31	.18	.17	3 PHL	
6552	1683 Barnes & Noble	BKS	33	2 3	1.15	35-50	(5-50%)	37.5	NIL	.88	NIL	12	10/31	NIL	d.04	12/31	NIL	NIL	2 ASE	
1351	Barnes Group	B	23	3 2	.75	30-40	(30-75%)	11.1	2.9	2.08	.67	36	9/30	.50	.44	12/31	.167	.15	3	
987	2108 Barnett Banks Inc.	BBI	73	-	3	1.25	50-70	(N-N)	22.7	1.9	3.21	1.36	58	9/30	.86	.65	3/31	.31	.27	- ASE
2200	BARRA, Inc.	(NDQ) BARZ	24	1 3	1.00	40-70	(65-190%)	18.5	NIL	1.30	NIL	10	9/30	.26	.21	12/31	NIL	NIL	2	
1874	Barrett Resources	BRR	29	3 4	.80	45-70	(55-140%)	32.2	NIL	.90	NIL	1	9/30	.14	.22	12/31	NIL	NIL	3 PAC	
1209	Barrick Gold	ABX	19	4 3	.75	30-45	(60-135%)	24.7	0.8	.77	.16	91	9/30	.19	.17	12/31	.08	.07	5 ASE	
1435	1672 Barry (R.G.)	(NDQ) RGB	11	3 4	.95	20-30	(80-175%)	10.9	NIL	1.01	NIL	78	9/30	.52	.50	12/31	NIL	NIL	3	
903	Bassett Furniture	BSET	31	4 3	.65	25-40	(N-30%)	22.5	3.2	1.38	1.00	29	8/31	.33	.36	12/31	.20	.20	3	
1210	Battle Mtn. Gold Co.	BMG	5%	4 3	.45	9-13	(55-120%)	NMF	0.8	d.06	.05	91	9/30	d.01	NIL	12/31	NIL	NIL	4 CBO	
207	Bausch & Lomb	BOL	39	4 3	.95	50-70	(30-80%)	18.1	2.8	2.15	1.10	34	9/30	.53	.54	3/31	.26	.26	3 ASE	
208	Baxter Int'l Inc.	BAX	50	3 3	1.10	65-95	(30-80%)	20.4	2.4	2.45	1.20	34	9/30	.57	.50	3/31	▲.291	.283	3 CBO	
1086	Bay Networks	BAY	26	2 3	1.35	25-40	(N-55%)	27.4	NIL	.95	NIL	7	9/30	.22	.25	12/31	NIL	NIL	1 PHL	
469	Bay State Gas	BGC	37	-	2	.55	35-45	(N-20%)	17.6	4.4	2.10	1.61	86	9/30	d.70	d.60	12/31	.395	.385	-
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Recent Price		NAME OF STOCK	Ticker Symbol	Beta	Estimated Range of 3-5 yr. average prices 2000-2002	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. to 6-30-98	(f) Est'd Div'd next 12 mos.	LATEST RESULTS														
										Qtr. Ended	Earnings Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago									
433	Can. Occidental Pet.	(TSE)	CXY.TO	33	b	4	3	.65	40-60	(20-80%)	30.8	0.9	1.07	.30	92	9/30	.23(b)	.34(b)	3/31	.075(b)	.075(b)	2	TCO	
301	Canadian Pac. Ltd.		CP	27		3	3	.95	35-55	(30-105%)	13.8	1.3	1.95	.36	49	9/30	.49	.39	3/31	.089	.089	3	PHL	
687	1537 Canandaigua Brands 'A'(NDO)		CBRNA	56		1	3	.70	65-95	(15-70%)	20.1	NIL	2.78	NIL	45	11/30	.90	.42	12/31	NIL	NIL	1	ASE	
1560	Canon Inc. ADR(g)	(NDO)	CANNY	118		3	2	.60	145-195	(25-65%)	21.1	0.6	5.60	.68	76	9/30	2.75(p)	2.10(p)	12/31	.309	.325	3		
686	2145 Capital One Fin'l		COF	54		1	3	1.45	55-80	(0-50%)	19.1	0.6	2.82	.32	13	9/30	.72	.58	12/31	.08	.08	3	CBO	
216	Cardinal Health		CAH	74		2	3	1.05	80-115	(10-55%)	29.6	0.2	2.50	.12	34	9/30	.49	.39	3/31	.025	.025	3	ASE	
124	Carlisle Cos.		CSL	43		2	2	.80	65-85	(50-100%)	17.0	1.4	2.53	.60	50	9/30	.63	.50	12/31	.14	.123	2		
1561	Carlton ADR(g)	(NDO)	CCTVY	40		3	3	.65	45-70	(15-75%)	26.5	2.4	1.51	.95	76	3/31	.64(p)	.55(p)	12/31	NIL	NIL	4		
1775	Carnival Corp. 'A'		CCL	55		2	3	1.15	45-65	(N-20%)	24.1	1.1	2.28	.60	38	11/30	.54	.39	12/31	.15	.11	3	CBO	
168	Carolina Power & Lt.		CPL	42		4	1	.80	30-40	(N-NK)	14.6	4.7	2.87	1.96	85	9/30	1.15	.88	3/31	.485	.47	4	PHL	
592	Carpenter Technology		CRS	49		3	3	.70	60-90	(20-85%)	12.1	2.7	4.05	1.32	83	9/30	.85	.46	12/31	.33	.33	3	PHL	
833	Carter-Wallace		CAR	17		3	3	1.20	15-25	(N-45%)	22.7	1.1	.75	.18	51	9/30	.10	.12	12/31	.04	.04	3	CBO	
1308	Cascade Corp.		CAE	17		4	3	.85	25-40	(45-135%)	11.8	2.9	1.46	.50	64	10/31	.24	.37	12/31	.10	.09	3		
471	Cascade Natural Gas		CGC	19		4	3	.60	16-25	(N-30%)	19.6	5.1	.97	.97	86	9/30	d.23	d.19	3/31	.24	.24	4		
1309	Case Corp.		CSE	60		3	3	1.20	80-125	(35-110%)	11.3	0.4	5.29	.25	64	9/30	.98	.80	3/31	.05	.05	3	ASE	
1509	Casey's Gen'l Stores	(NDO)	CASY	25		2	3	.80	30-45	(20-80%)	20.0	0.5	1.25	.12	71	10/31	.41	.34	3/31	.03	.025	3	CBO	
340	Catalina Marketing		POS	47		2	3	1.30	70-110	(50-135%)	24.9	NIL	1.89	NIL	15	9/30	.43	.35	12/31	NIL	NIL	2	ASE	
873	Catellus Development		CDX	20		3	3	.95	25-40	(25-100%)	64.5	NIL	.31	NIL	11	9/30	.06	d.05	12/31	NIL	NIL	3	ASE	
1310	Caterpillar Inc.		CAT	49		3	3	1.20	60-90	(20-85%)	11.1	2.0	4.41	1.00	64	9/30	1.03	.81	3/31	.25	.20	2	ASE	
1776	Cedar Fair L.P.		FUN	26		4	2	.75	30-40	(15-55%)	16.7	4.9	1.56	1.28	38	9/30	1.81	1.80	12/31	.32	.313	3		
533	2144 Candent Corp.		CD	34		Δ	1	3	1.25	40-60	(20-75%)	35.8	NIL	.95	NIL	13	10/31	.23	.18	12/31	NIL	NIL	2	PHL
1754	Centene Energy		CTX	63		1	3	1.35	50-75	(N-20%)	14.7	0.5	4.30	.32	11	9/30	1.20	.96	3/31	.07	.05	2	NYS	
531	217 Centocor	(NDO)	CNTO	33		2	5	1.35	45-80	(35-140%)	48.5	NIL	.68	NIL	34	9/30	.06	d.02	12/31	NIL	NIL	2	CBO	
686	704 Cen. & South West		CSR	27		-	3	.75	20-30	(N-10%)	15.1	6.4	1.79	1.74	90	9/30	.86	.90	12/31	.435	.435	-	PAC	
169	Cen. Hudson G. & E.		CNH	43		4	3	.60	30-45	(N-5%)	15.0	5.0	2.87	2.15	85	9/30	.72	.73	3/31	.535	.53	4		
705	Cen. La. Electric		CNL	33		4	1	.70	30-35	(N-5%)	15.1	4.9	2.19	1.61	90	9/30	1.00	.91	12/31	.395	.385	4		
170	Cen. Maine Power		CTP	15		3	4	.75	12-20	(N-35%)	18.3	6.0	.82	.90-63	85	9/30	d.24	.04	3/31	.225	.225	3		
1834	Cen. Newspapers 'A'		ECF	72		3	1	.75	75-95	(5-30%)	19.1	1.2	3.77	.86	56	9/30	.76	.57	3/31	.21	.19	2		
171	Cen. Vermont Pub. Serv.		CV	15		3	2	.75	12-16	(N-5%)	10.1	6.0	1.49	.90	85	9/30	d.02	d.11	3/31	.22	.22	4		
749	Century Tel. Enterprises		CTL	50		2	3	.95	Δ80-90	(20-80%)	19.8	0.8	2.53	.41	40	9/30	.67	.60	12/31	.093	.09	3	PAC	
1425	Cephalon Inc.	(NDO)	CEPH	12		3	4	1.15	20-35	(65-190%)	NMF	NIL	d1.63	NIL	21	9/30	d.47	d.68	12/31	NIL	NIL	5	CBO	
1595	2203 Ceridian Corp.		CEN	46		3	3	1.10	45-70	(N-50%)	17.7	NIL	2.60	NIL	10	9/30	.69	.55	12/31	NIL	NIL	3	CBO	
679	Cerner Corp.	(NDO)	CERN	21		2	4	1.40	25-40	(20-90%)	38.9	NIL	.54	NIL	2	9/30	.13	.02	12/31	NIL	NIL	1	CBO	
1550	Champion Enterprises		CHB	21		3	3	1.25	25-35	(20-65%)	14.0	NIL	1.50	NIL	6	9/30	.42	.42	12/31	NIL	NIL	3	ASE	
917	Champion Int'l		CHA	45		3	3	.95	60-85	(35-90%)	42.1	0.4	1.07	.20	89	9/30	.21	.34	3/31	.05	.05	3	CBO	
1792	Chancellor Media	(NDO)	AMFM	71		-	4	1.25	70-100	(N-40%)	NMF	NIL	d1.99	NIL	54	9/30	d.23	d.07	12/31	NIL	NIL	-		
1690	Charming Shoppes	(NDO)	CHRS	41 1/4		3	5	1.05	6-12	(30-155%)	36.2	NIL	.13	NIL	12	10/31	NIL	d.03	12/31	NIL	NIL	3	PHL	
1164	Charter One Fin'l	(NDO)	COFI	63		3	3	1.20	70-100	(10-60%)	15.6	1.7	4.05	1.05	16	9/30	.95	.84	12/31	.25	.219	3	PHL	
1757	2109 Chase Manhattan Corp.		CMB	110		-	3	NMF	105-160	(N-45%)	12.9	2.5	8.53	2.72	58	9/30	2.26	1.78	3/31	.62	.56	-	ASE	
137	Checkpoint Systems		CKP	17		2	4	1.15	25-40	(45-135%)	25.8	NIL	.66	NIL	9	9/30	.17	.15	12/31	NIL	NIL	3	PAC	
1354	Chemed Corp.		CHE	41		3	2	.70	45-60	(10-45%)	16.0	5.2	2.57	2.12	36	9/30	.21	.40	12/31	.53	.52	4		
1904	ChemFirst Inc.		CEM	28		-	3	NMF	30-50	(5-80%)	18.7	1.5	1.50	.43	87	9/30	.33	NA	12/31	.10	.10	-		
918	Chesapeake Corp.		CSK	34		4	3	.80	45-65	(30-90%)	23.8	2.4	1.43	.80	89	9/30	.41	.40	3/31	.20	.20	3	ASE	
408	Chevron Corp.		CHV	78		4	1	.85	85-105	(10-35%)	17.4	3.1	4.49	2.38	72	9/30	1.11	1.00	12/31	.58	.54	3	ASE	
372	Chile Fund		CH	17		4	4	.95	35-60	(105-255%)	NMF	4.7	NMF	.80	82	6/30	28.75(q)	27.09(q)	9/30	.26	.01	4		
1466	Chiquita Brands Int'l	(NDO)	CQB	16		3	4	.65	25-40	(55-150%)	37.2	1.3	.43	.20	42	9/30	d.57	d.20	12/31	.05	.05	3	PHL	
1252	Chiron Corp.		CHIR	17		2	3	1.10	30-45	(75-165%)	36.2	NIL	.47	NIL	21	9/30	.10	.04	12/31	NIL	NIL	3	ASE	
1467	Chock Full o' Nuts		CHF	6%		3	4	.85	8-13	(15-90%)	11.5	NIL	.60	NIL	42	10/31	.12	.11	12/31	NIL	NIL	3		
1278	1793 Chris-Craft		CCN	51		4	2	.80	55-70	(10-35%)	52.6	NIL	.97	NIL	54	9/30	.14	d.05	12/31	NIL	NIL	3	CBO	
102	Chrysler		C	35		4	3	.95	35-50	(0-45%)	8.3	5.1	4.24	1.80	43	9/30	.65	.93	3/31	.40	.40	3	CBO	
608	Chubb Corp.		CB	77		3	2	1.05	80-110	(5-45%)	17.7	1.6	4.36	1.21	62	9/30	1.12	.88	3/31	.29	.27	3	NYS	
957	Church & Dwight		CHD	30		3	3	.80	25-35	(N-15%)	21.7	1.6	1.38	.48	61	9/30	.33	.27	12/31	.12	.11	3		
706	CILCORP Inc.		CER	49		3	2	.70	Δ40-50	(N-0%)	16.3	5.0	3.01	2.46	90	9/30	.96	.92	12/31	.615	.615	4		
750	Cincinnati Bell		CSN	31		3	3	.90	40-55	(30-75%)	18.5	1.3	1.68	.40	40	9/30	.38	.32	3/31	.10	.10	4	CBO	
609	Cincinnati Financial	(NDO)	CINF	138		3	2	.70	90-125	(N-NK)	24.8	1.3	5.57	1.75	62	9/30	1.37	.82	3/					

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PAGE NUMBERS			Timeliness		Rank for Safety				Industry Rank				Technical Rank							
Bond type refers to			Recent Price		Estimated Range of 3-5 yr. average prices 2000-2002		Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. 6-30-98	(h) Est'd Div'd next 12 mos.	LATEST RESULTS				Where Options Trade					
Ratings and Reports: <i>Italics in Selection</i> & Opinion			NAME OF STOCK	Ticker Symbol	Beta	Qtr. Ended	Earnings Per Sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago	Qtr. Ended	Latest Div'd	Year Ago						
1612	Farah Inc.	FRA	5 1/4	3 4	.75	10-20	(80-265%)	10.4	NIL	.53	NIL	55	10/31	.15	.10	12/31	NIL	NIL	5	
300 887	Fastenal Co.	(NDQ) FAST	39	2 3	1.25	60-85	(55-120%)	32.8	0.1	1.19	.02	22	9/30	.30	.23	12/31	NIL	NIL	2 ASE	
130	Fedders Corp.	FJC	6 1/4	4 4	.70	12-20	(95-230%)	11.7	1.3	.52	.08	48	11/30	d.09	d.05	3/31	.02	.02	4 NYS	
968 270	Federal Express	FDX	61	3 3	1.25	70-110	(15-80%)	15.6	NIL	3.90	NIL	4	11/30	.91	.79	12/31	NIL	NIL	3 CBO	
6446 115	Federal-Mogul	FMO	41	2 3	1.15	45-70	(10-70%)	21.9	1.2	1.87	.50	77	9/30	.40	.01	12/31	.12	.12	2 PAC	
1179	Federal Rty. Inv. Trust	FRT	26	3 2	.75	30-40	(15-55%)	26.0	6.6	1.00	1.72	74	9/30	.24	.24	3/31	.43	.42	5	
1008	Federal Signal	FSS	22	5 2	.75	40-55	(80-150%)	18.2	3.2	1.36	.70	75	9/30	.35	.35	12/31	.168	NIL	5 ASE	
1651	Federated Dept. Stores	FD	43	2 3	1.15	50-70	(15-65%)	16.0	NIL	2.69	NIL	14	10/31	.47	.33	12/31	NIL	NIL	3 CBO	
501	Ferro Corp.	FOE	24	3 3	.85	30-45	(25-90%)	15.3	2.1	1.57	.50	73	9/30	.35	.30	12/31	.12	.103	3 PHL	
530 1634	Fieldcrest Cannon	SEE FINAL SUPPLEMENT - PAGE 530																		
633	Fifth Third Bancorp.	(NDQ) FITB	81	2 2	1.05	55-75	(N- N%)	29.8	1.1	2.72	.92	31	9/30	.66	.49	3/31	.22	.193	3 PHL	
1357	Figgie Int'l 'A'	SEE LATEST REPORT																		
1698	Filene's Basement	(NDQ) BSMT	4	3 5	1.00	10-19	(150-375%)	10.5	NIL	.38	NIL	12	10/31	.15	.17	12/31	NIL	NIL	3 ASE	
1699	Fingerhut Cos.	FHT	21	2 3	.90	25-40	(20-90%)	14.5	0.8	1.45	.16	12	9/30	.26	.18	12/31	.04	.04	2 NYS	
2148	FINOVA Group	FNV	50	2 3	1.05	50-75	(0-50%)	18.7	1.1	2.67	.56	13	9/30	.63	.54	3/31	.14	.12	3 ASE	
634	First American (Tenn.)	(NDQ) FATN	50	3 3	1.05	40-65	(N-30%)	19.5	1.8	2.57	.88	31	9/30	.63	.47	12/31	.20	.155	2 CBO	
373	First Australia Fund	(ASE) IAF	7 1/4	4 3	.90	15-20	(105-175%)	NMF	3.4	NMF	.25	82	4/30	10.66(q)	11.18(q)	9/30	.052	.15	5	
976	First Australia Prime	(ASE) FAX	7 1/4	4 2	.60	12-16	(65-120%)	NMF	9.9	NMF	.72	79	4/30	9.47(q)	9.65(q)	12/31	.18	.21	5	
961	First Brands Corp.	FBR	27	5 3	.75	30-45	(10-65%)	16.4	1.5	1.65	.40	61	9/30	.30	.43	3/31	.10	.08	4 PHL	
635	First Chicago NBD	FCN	83	- 2	NMF	70-95	(N-15%)	15.1	2.2	5.16	1.80	31	9/30	1.26	1.08	3/31	.44	.40	- CBO	
2210	First Data Corp.	FDC	30	3 2	1.30	45-60	(50-100%)	29.1	0.3	1.03	.08	10	9/30	.42	.36	3/31	.02	.02	3 ASE	
1426	First Empire State	(ASE) FES	455	3 2	.65	440-600	(N-30%)	16.4	0.7	27.82	3.20	58	9/30	6.62	5.05	12/31	.80	.70	3	
2114	First Hawaiian Inc.	(NDQ) FHCN	41	3 2	.80	40-55	(N-35%)	14.8	3.1	2.77	1.29	58	9/30	.67	.60	12/31	.31	.31	3	
654	First Health Group	(NDQ) FHCC	52	2 3	1.20	65-95	(25-85%)	18.2	NIL	2.86	NIL	39	9/30	.67	.57	12/31	NIL	NIL	2 CBO	
246 636	First of Amer. Bank	FOA	77	- 1	1.00	50-60	(N- N%)	22.3	1.9	3.45	1.43	31	9/30	.89	.56	3/31	.35	.313	- PHL	
1427	First Security	(NDQ) FSCO	38	3 3	.90	25-35	(N- N%)	20.0	1.8	1.90	.68	58	9/30	.45	.41	12/31	.17	.153	2 ASE	
637	First Tenn National	(NDQ) FTEN	66	3 2	.95	55-75	(N-15%)	20.6	2.0	3.20	1.35	31	9/30	.85	.69	3/31	.33	.30	3 PHL	
2115	First Union Corp.	FTU	51	3 2	1.15	50-70	(N-35%)	13.7	2.9	3.71	1.48	58	9/30	.90	.65	3/31	.37	.29	3 PAC	
1180	First Union Real Est.	FUR	16	3 3	.60	11-17	(N-5%)	44.4	2.8	.36	.44	74	9/30	.03	.06	3/31	.11	.11	3	
2116	First Va. Banks	FVB	52	3 1	.95	40-50	(N- N%)	19.5	2.2	2.67	1.12	58	9/30	.67	.58	3/31	.28	.25	3	
638	Firstar Corp.	FSR	42	3 2	1.10	35-50	(N-20%)	19.7	2.1	2.13	.90	31	9/30	.62	.46	12/31	.21	.19	3 CBO	
1754 712	FirstEnergy Corp.	FE	29	4 3	.75	25-35	(N-20%)	14.6	5.2	1.98	1.50	90	9/30	.61	.62	12/31	.375	.375	4 PAC	
2211	Fiserv Inc.	(NDQ) FISV	50	2 3	1.10	55-80	(10-60%)	27.5	NIL	1.82	NIL	10	9/30	.43	.34	12/31	NIL	NIL	3 PHL	
222	Fisher Scientific	FSH	48	- 3	.70	55-80	(15-65%)	20.8	0.2	2.31	.08	34	9/30	.44	.56	12/31	.02	.02	- CBO	
2117	Fleet Fin'l Group	FLT	73	3 3	1.20	65-95	(N-30%)	14.7	2.7	4.96	2.00	58	9/30	1.20	1.02	3/31	.49	.45	3 ASE	
1553	Fleetwood Enterprises	FLE	42	2 3	1.30	35-50	(N-20%)	18.6	1.8	2.26	.68	6	10/31	.77	.68	3/31	.17	.16	3 ASE	
1525	Fleming Cos.	FLM	14	3 4	.70	25-40	(80-185%)	12.5	0.6	1.12	.08	47	9/30	.23	.19	12/31	.02	.02	3 PAC	
180	Florida Progress	FPC	39	4 2	.65	30-40	(N-5%)	14.3	5.5	2.73	2.14	85	9/30	1.05	1.01	12/31	.525	.515	4	
896	Florida Rock	(ASE) FRK	23	2 3	.70	25-35	(10-50%)	10.6	1.1	2.16	.25	8	9/30	.55	.52	3/31	.125	.125	2	
1474	Flowers Inds.	FLO	20	3 3	.75	20-35	(0-75%)	23.5	2.3	.85	.45	42	9/30	.17	.10	12/31	.113	.101	3 PHL	
1320	Flowserve Corp.	FLS	27	- 3	NMF	40-55	(50-105%)	13.3	2.1	2.03	.56	64	9/30	.42	NA	12/31	.14	NIL	-	
1032	Fluke Corp.	FLK	26	4 3	.80	40-60	(55-130%)	14.5	1.3	1.79	.35	27	10/31	.39	.36	3/31	.088	.08	5	
858	Fluor Corp.	FLR	37	5 3	1.05	95-145	(155-290%)	11.1	2.2	3.33	.82	65	10/31	1.04	.93	3/31	.20	.19	5 CBO	
1511	Food Lion B'	(NDQ) FDLNB	8 1/4	3 3	.65	12-17	(45-105%)	15.6	1.8	.54	.15	71	9/30	.12	.11	12/31	.033	.028	4 ASE	
104	Ford Motor	F	49	3 3	1.00	45-65	(N-35%)	9.4	3.7	5.22	1.80	43	9/30	.99	.56	12/31	.42	.385	3 CBO	
1755	Forest Labs	(ASE) FRX	47	3 3	1.00	65-95	(40-100%)	25.7	NIL	1.83	NIL	21	9/30	.37	.13	12/31	NIL	NIL	3 CBO	
1862	Forest Oil	FST	16	3 5	.75	20-40	(25-150%)	43.2	NIL	.37	NIL	59	9/30	.02	.01	12/31	NIL	NIL	3	
921	Fort James	FJ	37	2 3	1.05	50-70	(35-90%)	15.6	1.7	2.37	.63	89	9/30	.54	.49	12/31	.15	.15	2 NYS	
1358	Fortune Brands	FO	38	- 2	NMF	30-45	(N-20%)	25.5	2.2	1.49	.84	36	9/30	.29	NIL	12/31	.21	NIL	-	
1321	Foster Wheeler	FWC	27	5 3	1.10	65-95	(140-250%)	28.7	3.2	.94	.87	64	9/30	d.72	.59	12/31	.21	.205	3 PAC	
1214	Franco-Nevada	(TSE) FN.TO	28	b 4	3	.55	35-50	(25-80%)	39.4	1.4	.71	.38	91	9/30	.19(b)	.21(b)	12/31	NIL(b)	NIL(b)	4
1009	Franklin Electric	(NDQ) FELE	60	3 3	.60	55-80	(N-35%)	16.3	1.1	3.68	.63	75	9/30	.96	.84	12/31	.15	.12	3	
2149	Franklin Resources	BEN	88	2 3	1.75	85-130	(N-50%)	21.3	0.5	4.14	.40	13	9/30	.99	.67	3/31	.10	.08	2 PAC	
1652	Fred Meyer	FMY	35	2 3	.75	30-45	(N-30%)	23.3	NIL	1.50	NIL	14	10/31	.22	.12	12/31	NIL	NIL	2 PAC	
1167	Freddie Mac	FRE	42	2 2	1.40	40-55	(N-30%)	20.5	1.0	2.05	.44	16	9/30	.49	.41	12/31	.10	.088	3 ASE	
390 1230	Freeport-McMoRan C&G	FCX	16	5 3	1.00	40-55	(150-245%)	15.8	1.3	1.01	.20	94	9/30	.19	.24	3/31	.05	.225	5 PHL	
1908	Freeport-McMoRan Res.	FRP	8 1/4	5 3	.55	15-25	(70-185%)	6.9	11.5	1.26	1.00	87	9/30	.26	.37	12/31	.10	.60	5 ASE	
610	Fremont Gen'l	FMT	55	2 3	.95	60-80	(10-45%)	15.9	1.1	3.47	.60	62	9/30	.85	.71	3/31	.15	.15	2	
753	Frontier Corp.	FRO	24	3 3	1.05	25-35	(5-45%)	23.5	3.8	1.02	.90	40	9/30	.24	.45	3/31	.223	.218	3 CBO	
1927 511	Frontier Ins. Group	FTR	23	3 3	.90	35-55	(50-140%)	13.1	1.3	1.76	.31	62	9/30	.42	.33	3/31	.07	.065	2	
1613	Fruit of the Loom	FTL	25	5 3	.85	30-50	(20-100%)	30.9	NIL	.81	NIL	55	9/30	d.08	.63	12/31	NIL	NIL	5 NYS	
1562	Fuji Photo ADR(g)	(NDQ) FUJY	39	4 2	.70	40-55	(5-40%)	25.5	0.5	1.53	.20	76	9/30	.81(p)	.71(p)	12/31	.094	.094	3	

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NAME OF STOCK	Ticker Symbol		Qtr. Ended	Earnings Per sh.	Year Ago							Qtr. Ended	Latest Div'd	Year Ago							
1887	Rowan Cos.	RDC	30	1	4	1.15	40-65	(35-115%)	13.0	NIL	2.31	NIL	1	9/30	.61	.26	12/31	NIL	NIL	1 ASE	
1578	Royal Bank of Canada (TSE)	RY.TO	76	b	3	2	.95	75-100	(N-30%)	13.7	2.2	5.55	1.68	33	10/31	1.35(b)	1.09(b)	3/31	▲.42(b)	.37(b)	3 TCO
1785	Royal Caribbean Cruises	RCL	52	3	3	.70	45-65	(N-25%)	21.3	1.2	2.44	.60	38	9/30	.95	.83	12/31	.15	.14	2 ASE	
420	Royal Dutch Petr.	RD	55	4	1	.80	60-70	(10-25%)	21.5	2.9	2.56	1.60	72	9/30	.58	.55	12/31	.643(p)	.634(p)	3 ASE	
2189	Royce Value Trust	RVT	15	3	3	.75	20-30	(35-100%)	NMF	1.7	NMF	.26	66	6/30	16.19(q)	14.48(q)	6/30	NIL	NIL	3	
970	Rubbermaid, Inc.	RBD	25	5	2	.85	30-40	(20-60%)	24.0	2.6	1.04	.64	61	9/30	.20	.31	12/31	▲.16	.15	3 PAC	
326	Ruby Tuesday	RI	26	-	3	NMF	25-40	(N-55%)	15.8	0.7	1.65	.18	35	8/31	.36	.31	12/31	NIL	NIL	-	
1518	Ruddick Corp.	RDK	17	4	3	.60	17-25	(0-45%)	15.5	2.1	1.10	.35	71	9/30	.25	.25	3/31	.08	.08	4	
★ 1622	Russell Corp.	RML	28	▼	5	.65	30-45	(5-60%)	13.3	2.0	2.10	.56	55	9/30	.64	.63	12/31	▲.14	.13	5 ASE	
327	Ryan's Family	RYAN	8%	3	3	.70	15-20	(70-130%)	10.4	NIL	.84	NIL	35	9/30	.20	.18	12/31	NIL	NIL	3	
287	Ryder System	R	33	4	3	.95	45-65	(35-95%)	14.2	1.8	2.32	.60	17	9/30	.50	.42	12/31	.15	.15	3 PAC	
685	Rykoff-Sexton	SEE FINAL SUPPLEMENT - PAGE 685																			
880	Ryland Group	RYL	24	2	3	.90	19-30	(N-25%)	21.8	0.7	1.10	.16	11	9/30	.42	.25	3/31	▼.04	.15	2 PHL	
760	SBC Communications	SBC	74	▲	1	.90	85-105	(15-40%)	19.0	2.5	3.89	1.87	40	9/30	.94	.97	3/31	▲.448	.43	3 PAC	
6528	SCI Systems	SCI	42	1	3	1.80	45-70	(5-65%)	20.4	NIL	2.06	NIL	7	9/30	.53	.38	12/31	NIL	NIL	1 CBO	
2160	SLM Holding(e)	SLM	39	2	3	1.25	55-85	(40-120%)	12.1	1.5	3.22	.59	13	9/30	.76	.51	12/31	▲.14	.125	2 CBO	
584	SPS Technologies	ST	44	2	3	.75	45-70	(0-60%)	16.4	NIL	2.68	NIL	25	9/30	.66	.48	12/31	NIL	NIL	3	
118	SPX Corp.	SPW	70	2	3	.65	80-120	(15-70%)	20.1	NIL	3.49	NIL	77	9/30	.80	.41	12/31	NIL	.10	2 NYS	
623	SAFECO Corp.	SAFC	49	5	2	.90	55-80	(10-65%)	14.0	2.7	3.51	1.34	62	9/30	.96	.92	3/31	.32	.29	3 NYS	
1042	Safeguard Scientifics	SFE	32	3	3	1.30	50-75	(55-135%)	47.8	NIL	.67	NIL	27	9/30	.16	.15	12/31	NIL	NIL	2 ASE	
6456	Safeskin Corp.	SFSK	55	1	3	1.05	60-90	(10-65%)	34.2	NIL	1.61	NIL	34	9/30	.39	.25	12/31	NIL	NIL	1 CBO	
1927	Safety-Kleen	SK	28	-	3	.80	20-35	(N-25%)	23.7	1.3	1.18	.36	37	9/30	.28	.24	12/31	.09	.09	- PHL	
1519	Safeway Inc.	SWY	62	2	3	.80	50-75	(N-20%)	22.5	NIL	2.76	NIL	71	9/30	.60	.44	12/31	NIL	NIL	3 CBO	
1664	Saks Holdings	SKS	21	-	3	NMF	25-40	(20-90%)	13.5	NIL	1.56	NIL	14	10/31	.47	.25	12/31	NIL	NIL	- ASE	
785	Salient 3 Communic.	STCIA	12	-	3	.60	25-35	(110-190%)	NMF	3.3	▼.25	.40	5	9/30	d.20	.24	12/31	.10	.10	-	
1623	St. John Knits	SJK	41	3	3	.80	45-65	(10-60%)	18.4	0.2	2.23	.10	55	10/31	.64	.50	3/31	.025	.025	3	
728	St. Joseph Lt. & Power	SAJ	18	4	2	.50	19-25	(5-40%)	12.7	5.5	1.42	.99	90	9/30	.67	.67	12/31	.24	.235	4	
238	St. Jude Medical	STJ	30	5	3	1.05	50-80	(65-165%)	21.6	NIL	1.39	NIL	34	9/30	.20	.44	12/31	NIL	NIL	4 CBO	
1172	St. Paul Bancorp	SPBC	26	3	3	.95	25-40	(N-55%)	17.2	1.6	1.51	.42	16	9/30	.35	d.11	12/31	.10	.064	2 CBO	
624	St. Paul Cos.	SPC	82	3	2	.85	80-110	(N-35%)	13.5	2.4	6.06	1.95	62	9/30	1.76	1.26	3/31	.47	.44	3 CBO	
2190	Salomon Bros. Fund	SBF	18	3	2	.95	20-30	(10-65%)	NMF	1.9	NMF	.35	66	6/30	19.42(q)	16.67(q)	9/30	.07	.09	3 PHL	
246	Salomon Inc.	SEE FINAL SUPPLEMENT - PAGE 246																			
1753	Samsonite Corp.	SAMC	31	2	4	.90	45-75	(45-140%)	13.2	NIL	2.35	NIL	61	10/31	.72	.32	12/31	NIL	NIL	3	
1867	Santa Fe Energy Res.	SFR	11	-	3	NMF	15-20	(35-80%)	27.5	NIL	.40	NIL	59	9/30	.09	.14	12/31	NIL	NIL	- ASE	
1278	Santa Fe Pac. Pipeline	SFL	45	-	3	.55	40-60	(N-35%)	11.3	6.9	4.00	3.10	15	9/30	1.06	.98	12/31	.75	.75	-	
1493	Sara Lee Corp.	SLE	57	3	1	1.00	50-60	(N-5%)	25.1	1.6	2.27	.92	42	9/30	.44	.41	3/31	▲.23	.21	3 ASE	
685	Savannah Foods	SEE FINAL SUPPLEMENT - PAGE 685																			
328	Sbarro, Inc.	SBA	26	4	3	.75	40-55	(55-110%)	13.2	4.2	1.97	1.08	35	9/30	.45	.45	3/31	.27	.23	4 ASE	
194	SCANA Corp.	SCG	30	4	1	.70	30-35	(0-15%)	14.6	5.2	2.06	1.55	85	9/30	.69	.66	3/31	.377	.367	5	
1273	Scherer (R.P.)	SHR	60	3	3	.95	65-95	(10-60%)	22.1	NIL	2.71	NIL	21	9/30	.56	.47	12/31	NIL	NIL	3 ASE	
1274	Schering-Plough	SGP	62	2	1	1.15	55-65	(N-5%)	29.4	1.3	2.11	.82	21	9/30	.48	.40	12/31	.19	.165	2 PAC	
1888	Schlumberger Ltd.	SLB	79	2	1	.90	105-130	(35-65%)	25.6	1.0	3.08	.80	1	9/30	.72	.47	3/31	.188	.188	2 CBO	
1831	Scholastic Corp.	SCHL	39	3	3	1.10	40-60	(5-55%)	27.9	NIL	1.40	NIL	68	11/30	1.99	2.36	12/31	NIL	NIL	2 CBO	
522	Schulman (A.)	SHLM	25	3	3	.80	25-40	(0-60%)	16.6	1.8	1.51	.45	73	8/31	.42	.37	12/31	.105	.095	3 PAC	
1422	Schwab (Charles)	SCH	41	1	3	2.00	30-50	(N-20%)	35.7	0.5	1.15	.20	3	9/30	.28	.21	12/31	▲.04	.033	2 CBO	
786	Scientific Atlanta	SFA	17	2	3	1.60	25-40	(45-135%)	17.0	0.4	1.00	.06	5	9/30	.21	.14	12/31	.015	.015	2 PAC	
154	Scitex Corp. Ltd.	SCIXF	12	2	4	.90	14-25	(15-110%)	41.4	NIL	.29	NIL	9	9/30	.05	d.22	12/31	NIL	.13	2 ASE	
1335	Scotsman Inds.	SCT	25	5	3	.65	35-55	(40-120%)	13.9	0.4	1.80	.10	64	9/30	.56	.54	3/31	.025	.025	4	
971	Scotts Co. 'A'	SMG	31	3	3	.75	30-45	(N-45%)	21.7	NIL	1.43	NIL	61	9/30	d.32	d.40	12/31	NIL	NIL	3 PAC	
1844	Scripps (E.W.) 'A'	SSP	49	-	3	NMF	45-65	(N-35%)	28.2	1.1	1.74	.52	56	9/30	.34	.29	12/31	.13	.13	-	
381	Scudder New Asia Fund	SAF	9%	4	3	.90	25-40	(155-310%)	NMF	0.3	NMF	.03	82	6/30	17.26(q)	16.06(q)	9/30	NIL	NIL	5	
297	Sea Containers Ltd. 'A'	SCRA	32	2	3	.95	40-60	(25-80%)	13.7	2.4	2.33	.77	30	9/30	1.03	.45	12/31	.193	.192	2	
1107	Seagate Technology	SEG	19	5	3	1.45	55-80	(190-320%)	11.9	NIL	1.60	NIL	7	9/30	.08	.53	12/31	NIL	NIL	5 ASE	
1280	Seagram Co.	VO	32	4	2	1.05	50-70	(55-120%)	25.6	2.1	1.25	.66	45	9/30	.37	.34	12/31	.165	.165	5 PAC	
461	Seagull Energy	SGO	20	3	3	1.00	25-35	(25-75%)	39.2	NIL	.51	NIL	84	9/30	.05	.12	12/31	NIL	NIL	3 PHL	
951	Sealed Air	SEE	63	2	3	.90	45-70	(N-10%)	30.4	NIL	2.07	NIL	46	9/30	.50	.40	12/31	NIL	NIL	3 PHL	
952	Sealright Co.	SRCO	12	4	3	.85	12-17	(0-40%)	32.4	NIL	.37	NIL	46	9/30	.12	.25	12/31	NIL	NIL	3	
1665	Sears, Roebuck	S	45	3	3	1.00	65-95	(45-110%)	12.8	2.0	3.57	.92	14	9/30	.76	.70	3/31	.23	.23	3 CBO	
1786	Seattle FilmWorks	FOTO	12	3	3	.75	13-20	(10-65%)	18.5	NIL	.65	NIL	38	9/30	.27	.24	12/31	NIL	NIL	3	
1188	Security Cap. Pacific	PTR	24	4	3	.80	25-40	(5-65%)	22.6	5.8	1.06	1.38	74	9/30	.25	.26	3/31	.34	.325	4	
625	Selective Ins. Group	SIGI	28	3	3	.60	25-40	(N-45%)	12.0	2.1	2.33	.59	62	9/30	.61						

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PAGE NUMBERS		Timeliness		Rank for Safety		Industry Rank		Technical Rank																	
Bold type refers to Ratings and Reports;		Recent Price		Estimated Range of 3-5 yr. average prices 2000-2002		Current P/E Ratio		% Est'd Yield next 12 mos.		Est'd Earnings 12 mos. to 6-30-98		Qtr. Ended		Earnings Per sh.		Year Ago		Qtr. Ended		Latest Div'd		Year Ago		Where Options Trade	
Italics to Selection & Opinion		NAME OF STOCK		Ticker Symbol		Beta		SEE FINAL SUPPLEMENT - PAGE 2235		Nil		Nil		Nil		Nil		Nil		Nil		Nil		Nil	
2235	Signet Banking Corp.	SGI	12	3 3	1.15	25-35	(110-180%)	15.0	NIL	.80	NIL	7	9/30	d.20	.07	12/31	NIL	NIL	3	ASE					
986	1109 Silicon Graphics	SPG	33	3 2	.75	30-45	(N-35%)	26.8	6.2	1.23	2.04	74	9/30	.33	.20	12/31	.505	.493	4	ASE					
1755	1189 Simon DeBartolo Group	(NDQ) SMPS	12	3 3	.85	15-20	(25-65%)	12.5	3.5	.96	.42	44	9/30	.13	.19	12/31	.10	.10	3	ASE					
826	Simpson Inds.	SEW	8%	5 3	1.00	25-40	(200-375%)	NMF	2.4	d.03	.20	9	9/30	.02	.39	3/31	.05	.05	5	ASE					
155	Singer Co. N.V.	SKY	27	3 3	.90	25-40	(N-50%)	13.2	2.2	2.05	.60	6	11/30	.56	.56	3/31	.15	.15	3	CBO					
1433	1556 Skyline Corp.	SMF	18	5 3	.85	25-40	(40-120%)	15.4	1.1	1.17	.20	71	9/30	.30	.38	3/31	.05	.05	3	-					
1520	Smart & Final	AOS	43	- 3	.90	45-65	(5-50%)	18.0	1.8	2.39	.68	36	9/30	.51	.29	12/31	.17	.17	1	-					
1378	Smith (A.O.)	SII	59	2 3	.75	70-100	(20-70%)	20.2	NIL	2.92	NIL	1	9/30	.68	.42	12/31	NIL	NIL	1	PHL					
1889	Smith Int'l Inc.	(NDQ) SFDS	33	2 3	1.00	30-45	(N-35%)	20.1	NIL	1.64	NIL	42	10/31	.39	.23	12/31	NIL	NIL	1	PHL					
1495	Smithfield Foods	SBH	52	3 2	1.05	45-60	(N-15%)	36.6	1.7	1.42	.88	21	9/30	.30	.30	12/31	.21	.35	3	CBO					
1275	SmithKline Beecham	SJMA	24	3 3	.85	30-40	(25-65%)	18.9	2.3	1.27	.54	42	10/31	.30	.26	12/31	.13	.13	2	-					
1496	Smucker (J.M.) 'A'	SNA	43	3 2	.85	55-75	(30-75%)	16.4	2.0	2.62	.84	64	9/30	.58	.51	12/31	.21	.20	4	ASE					
1336	Snap-on Inc.	SDG	67	1 3	.85	65-95	(N-40%)	30.2	NIL	2.22	NIL	34	9/30	.53	.42	12/31	NIL	NIL	2	CBO					
239	Sofamor Danek Group	SOL	32	3 3	.90	50-75	(55-135%)	15.4	NIL	2.08	NIL	34	9/30	.46	.46	12/31	NIL	NIL	2	CBO					
240	Sola Int'l	SLR	40	3 3	1.80	50-70	(25-75%)	23.8	NIL	1.68	NIL	27	11/30	.38	.32	12/31	NIL	NIL	1	CBO					
1044	Soletron Corp.	SOI	27	- 3	NMF	30-40	(10-50%)	16.8	0.1	1.61	.04	67	9/30	.44	NA	12/31	.01	NIL	-	CBO					
2236	1243 Solutia Inc.	SNT	45	5 3	.70	60-90	(35-100%)	18.8	2.4	2.40	1.08	84	9/30	.45	.56	12/31	.27	.27	5	ASE					
462	Sonat Inc.	SON	35	4 2	.75	40-55	(15-55%)	18.6	2.1	1.88	.72	46	9/30	.42	.41	12/31	.18	.165	3	PHL					
954	Sonoco Products	SNE	90	3 3	.90	110-165	(20-85%)	22.2	0.8	4.06	.50	76	9/30	1.02	.61	12/31	.192	.219	3	ASE					
1571	Sony Corp. ADRI(g)	BID	18	3 3	.90	20-30	(10-65%)	18.6	2.4	.97	.43	12	9/30	d.16	d.17	12/31	.10	.08	3	ASE					
1722	Sotheby's Holdings 'A'	SJI	30	4 2	.55	25-30	(N-0%)	17.0	4.8	1.76	1.44	86	9/30	d.42	d.36	3/31	.36	.72	4	-					
487	South Jersey Inds.	(TSE) STM.TO	28	2 3	.60	25-35	(N-25%)	22.0	0.7	1.27	.20	56	9/30	.26(b)	.09(b)	12/31	.05(b)	.05(b)	3	PHL					
1845	Southam Inc.	SDW	58	2 3	.85	55-80	(N-40%)	13.5	0.7	4.30	.40	8	9/30	1.34	1.15	12/31	.10	.10	2	PHL					
899	Southdown, Inc.	SO	26	4 1	.70	25-30	(N-15%)	14.9	5.2	1.75	1.34	85	9/30	.71	.69	12/31	.325	.315	4	CBO					
195	Southern Co.	SNG	49	3 1	.80	45-60	(0-20%)	15.9	3.6	3.09	1.76	40	9/30	.74	.70	3/31	.44	.44	3	NYS					
761	Southern N.E. Telecom	(NDQ) SOTR	63	3 2	1.05	50-70	(N-10%)	19.7	1.7	3.20	1.08	58	9/30	.78	.68	3/31	.25	.22	3	PAC					
2127	SouthTrust Corp.	LUV	24	1 3	1.40	25-40	(5-65%)	16.9	0.2	1.42	.05	4	9/30	.40	.27	3/31	.01	.015	2	CBO					
273	Southwest Airlines	SWN	13	5 3	.80	17-25	(30-90%)	17.3	1.8	.75	.24	84	9/30	d.05	.01	12/31	.06	.06	5	-					
463	Southwestern Energy	SWX	19	3 3	.70	20-30	(5-60%)	21.8	4.3	.87	.82	86	9/30	d.58	d.55	12/31	.205	.205	4	-					
488	Southwest Gas	SLMD	19	4 3	.65	25-40	(30-110%)	14.5	NIL	1.31	NIL	34	9/30	.29	.36	12/31	NIL	NIL	4	PHL					
241	SpaceLabs Medical	SNF	14	3 3	.90	20-30	(45-115%)	NMF	1.1	NMF	.15	82	5/31	16.44(q)	11.81(q)	9/30	NIL	NIL	3	CBO					
382	Spain Fund	TRK	24	3 3	.95	25-40	(5-65%)	25.8	NIL	.93	NIL	38	9/30	d.02	.02	12/31	NIL	NIL	4	ASE					
1787	Speedway Motorsports	(NDQ) SPGLA	4 1/4%	3 5	1.40	10-19	(105-290%)	NMF	NIL	d.13	NIL	12	9/30	d.17	d.14	12/31	NIL	NIL	3	CBO					
1723	Spiegel, Inc. 'A'	TSA	16	3 4	.75	30-45	(50-180%)	15.2	NIL	1.05	NIL	12	10/31	.06	.06	12/31	NIL	NIL	3	ASE					
1724	Sports Authority	SMI	52	3 3	.95	55-85	(5-65%)	14.4	2.5	3.62	1.32	26	9/30	1.21	1.11	3/31	.33	.66	3	-					
1640	Springs Inds.	FON	58	4 3	1.05	55-85	(N-45%)	30.2	1.7	1.92	1.00	40	9/30	.49	.73	12/31	.25	.25	3	PHL					
762	Sprint Corp.	SMSC	8%	3 4	1.35	11-18	(30-115%)	NMF	NIL	d.10	NIL	7	11/30	.02	d.10	12/31	NIL	NIL	2	ASE					
1110	Standard Microsystems	SMP	23	3 3	.90	20-30	(N-30%)	16.2	1.4	1.42	.32	77	9/30	.60	.27	12/31	.08	.08	2	-					
119	Standard Motor Prod.	SPF	16	1 4	1.20	11-18	(N-15%)	19.8	1.0	.81	.16	11	9/30	.24	.10	12/31	.04	.03	2	PHL					
881	Standard Pacific Corp.	SPD	26	3 3	.80	30-50	(15-90%)	11.1	2.8	2.35	.72	44	9/30	.17	.08	3/31	.17	.17	3	-					
1281	827 Standard Products	SXI	35	4 3	.65	40-60	(15-70%)	14.9	2.3	2.35	.79	36	9/30	.58	.56	12/31	.19	.19	3	-					
1379	Standex Int'l	STH	25	- 2	.70	35-45	(40-80%)	16.3	4.5	1.53	1.12	12	9/30	.48	.64	3/31	.28	.28	-	ASE					
1725	Stanhope Inc.	SWK	46	3 3	.95	40-60	(N-30%)	20.4	1.7	2.25	.80	64	9/30	.55	.42	12/31	.20	.185	3	PAC					
1337	Stanley Works	(NDQ) SPLS	28	1 3	1.50	30-45	(5-60%)	30.1	NIL	.93	NIL	18	10/31	.26	.19	12/31	NIL	NIL	2	PHL					
6432	1135 Staples, Inc.	STB	58	3 2	.85	45-60	(N-5%)	23.7	1.5	2.45	.88	31	9/30	.58	.43	3/31	.20	.157	3	PAC					
646	Star Banc Corp.	(NDQ) SBUX	38	2 3	1.30	45-70	(20-65%)	41.8	NIL	.91	NIL	35	9/30	.22	.16	12/31	NIL	NIL	2	CBO					
1752	Starbucks Corp.	STT	58	2 3	1.20	50-80	(N-40%)	23.1	0.8	2.51	.48	58	9/30	.62	.46	3/31	.12	.10	2	PHL					
2128	State Street Corp.	STN	10	3 5	1.10	10-18	(0-80%)	NMF	NIL	.07	NIL	24	9/30	.02	.24	12/31	NIL	NIL	4	ASE					
389	1816 Station Casinos	(NDQ) STTX	12	3 4	.95	20-30	(65-150%)	13.6	0.8	.88	.10	83	9/30	.13	.24	12/31	.05	.05	3	-					
600	Steel Technologies	SE	38	- 3	NMF	45-70	(20-85%)	32.2	NIL	1.18	NIL	10	9/30	.30	.24	12/31	NIL	NIL	-	CBO					
2226	Sterling Commerce	SSW	41	- 3	NMF	40-60	(N-45%)	19.4	NIL	2.11	NIL	10	9/30	.61	.57	12/31	NIL	NIL	-	PHL					
2227	Sterling Software	(NDQ) SSSS	25	3 3	.85	30-50	(20-100%)	16.1	1.5	1.55	.37	64	10/31	.26	.22	3/31	.085	.085	3	PAC					
1338	Stewart & Stevenson	(NDQ) STEI	48	2 3	.80	45-65	(N-35%)	27.3	0.2	1.76	.11	36	10/31	.36	.30	3/31	.02	.02	3	CBO					
1380	Stewart Enterpr. 'A'	(NDQ) STLT	21	3 3	.95	30-45	(45-115%)	10.0	2.4	2.10	.50	30	8/31	.72	.67	12/31	.25	.25	3	-					
1432	Stolt-Nielsen	STO	10	3 5	1.55	16-30	(60-200%)	NMF	NIL	d.94	NIL	89	9/30	d.99	d.53	12/31	NIL	.15	2	PAC					
1435	935 Stone Container	STK	61	1 4	1.30	65-105	(5-70%)	15.6	NIL	3.91	NIL	7	9/30	.87	.65	12/31	NIL	.15	2	CBO					
1111	Storage Technology	SRA	37	3 3	1.35	60-85	(60-130%)	10.8	NIL	3.42	NIL	7	9/30	.77	.45	12/31	NIL	NIL	2	PAC					
1280	1112 Stratus Computer	SRR	12	3 3	.50	16-25	(35-110%)	26.7	1.7	.45	.20	78	8/31	.17	.06	12/31	.05	.05	4	PAC					
1677	Stride Rite Corp.	SVK	38	2 3	1.35	40-60	(5-60%)	27.3	0.3	1.39	.10	34													

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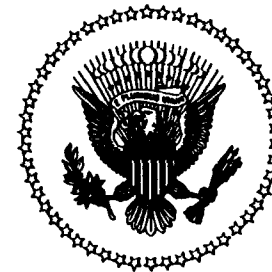
PAGE NUMBERS		Timeliness		Rank for Safety				Industry Rank				Technical Rank																
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NAME OF STOCK		Ticker Symbol														Qtr. Ended		Earnings Per sh.		Year Ago		Qtr. Ended		Latest Div'd		Year Ago		
1532	Sysco Corp.	SY	45	3	2	.95	50-65	(10-45%)	23.1	1.5	1.95	.68	47	9/30	.47	.41	3/31	▲.17	.15	3	NYS							
390	2231 System Software	(NDQ) SSAX	8 1/2	2	5	1.15	19-35	(130-325%)	14.6	NIL	.56	NIL	10	10/31	.21	d.13	12/31	NIL	NIL	1	PAC							
127	TBC Corp.	(NDQ) TBC	9 1/2	2	3	.80	14-20	(45-105%)	10.5	NIL	.93	NIL	50	9/30	.26	.20	12/31	NIL	NIL	3	NYS							
330	TCBY Enterprises	TBY	7 1/2	3	3	.65	9-13	(15-65%)	19.8	2.5	.40	.20	35	8/31	.18	.15	3/31	.05	.05	3	PAC							
647	TCF Financial	TCB	34	2	3	1.25	30-45	(N-30%)	19.3	1.7	1.76	.57	31	9/30	.43	.08	12/31	.125	.094	2								
984	TCW Conv. Sec. Fund	CVT	9 1/2	3	2	.60	12-16	(25-65%)	NMF	8.8	NMF	.84	79	6/30	8.76(q)	8.56(q)	12/31	.21	.21	4								
1572	TDK Corp. ADR(g)	TDK	76	3	3	.70	90-135	(20-80%)	22.9	0.8	3.32	.59	76	6/30	.83	.60	12/31	.192	.228	3								
196	TECO Energy	TE	28	5	1	.70	25-35	(N-25%)	16.7	4.4	1.68	1.23	85	9/30	.51	.56	12/31	.295	.28	4	PHL							
868	TJ International	(NDQ) TJCO	25	3	3	1.10	30-50	(20-100%)	17.5	0.9	1.43	.22	65	9/30	.45	.40	3/31	.055	.055	3	PHL							
1726	TJX Companies	TJX	33	1	3	1.35	35-50	(5-50%)	18.2	0.7	1.81	.24	12	10/31	.59	.45	3/31	.05	.035	2	CBO							
730	TNP Enterprises	TNP	33	3	4	.85	25-40	(N-20%)	12.8	3.3	2.58	1.10	90	9/30	.16	1.24	12/31	▲.27	.245	3								
1381	TRW Inc.	TRW	54	3	1	1.00	80-100	(50-85%)	13.4	2.3	4.03	1.26	36	9/30	.85	d.11	3/31	.31	.31	4	ASE							
1136	TAB Products	(ASE) TBP	12	2	3	.75	13-19	(10-60%)	13.0	1.7	.92	.20	18	11/30	.27	.24	12/31	.05	.05	3								
384	Taiwan Fund	TWN	17	3	4	.80	35-60	(105-255%)	NMF	0.6	NMF	.10	82	8/31	35.98(q)	22.25(q)	9/30	NIL	NIL	4								
1727	Talbots Inc.	TLB	18	4	3	1.10	40-60	(120-235%)	11.6	2.4	1.55	.44	12	10/31	.35	.60	12/31	.11	.09	4	PAC							
443	Talisman Energy	(TSE) TLM.TO	44	b	4	3	.65	50-75	(15-70%)	73.3	NIL	.60	NIL	92	9/30	.14(b)	.17(b)	12/31	NIL(b)	NIL(b)	4	TCO						
158	Talley Inds.	TAL	12	-	5	1.00	11-20	(N-65%)	20.7	NIL	.58	NIL	9	9/30	.15	d.08	12/31	NIL	NIL	-								
1728	Tandy Corp.	TAN	38	2	3	1.15	40-60	(5-60%)	19.9	1.1	1.91	.40	12	9/30	.33	.18	3/31	.10	.10	2	CBO							
1754	Tandycrafts, Inc.																											
244	Technical Chemicals	(NDQ) TCPI	11	3	4	.45	40-65	(265-490%)	NMF	NIL	d.65	NIL	34	9/30	d.14	d.06	12/31	NIL	NIL	1								
1220	Teck Corp. 'B'	(TSE) TEKB.TO	22	b	4	3	.75	25-40	(15-80%)	29.3	0.9	.75	20	9/30	.17(b)	.11(b)	12/31	.10(b)	.10(b)	5	TCO							
1339	Tecumseh Products 'A'	(NDQ) TECUA	50	5	2	.60	55-75	(10-50%)	11.7	3.5	4.26	1.77	64	9/30	1.00	1.24	12/31	.30	.90	5	ASE							
159	Teknomic, Inc.	TEK	39	2	3	1.20	55-85	(40-120%)	14.7	1.2	2.65	.48	9	11/30	.63	.54	3/31	.12	.10	3	CBO							
764	Tel-Save Holdings	(NDQ) TALK	21	2	4	.75	25-40	(20-90%)	29.2	NIL	.72	NIL	40	9/30	.12	.08	12/31	NIL	NIL	2	CBO							
841	Tele-Communic. 'A'	(NDQ) TCOMA	28	3	3	1.00	40-60	(45-115%)	NMF	NIL	d.58	NIL	53	9/30	d.33	d.24	12/31	NIL	NIL	1	ASE							
799	Tele Danmark ADR(g)	TLD	31	3	2	.50	35-45	(15-45%)	14.0	4.2	2.22	1.30	60	6/30	.91(p)	.88(p)	12/31	NIL	NIL	4	CBO							
800	Telecom N. Zealand ADR	NZT	39	4	3	.90	40-60	(5-55%)	16.9	6.4	2.31	2.51	60	9/30	.57	.57	12/31	▲.579	.624	3	ASE							
801	Telecom. de Chile ADR(g)	CTC	30	3	3	1.10	35-50	(15-65%)	16.8	2.7	1.79	.81	60	9/30	.57	.29	12/31	.15	.145	3	ASE							
1382	Teleflex Inc.	TFX	38	3	3	.75	50-70	(30-85%)	19.8	1.1	1.92	.40	36	9/30	.36	.28	12/31	.10	.088	3	PHL							
802	Telefonica Espana ADR(g)	TEF	91	3	3	.95	45-145	(5-60%)	24.3	2.3	3.74	2.05	60	9/30	1.55	1.32	12/31	NIL	NIL	3	ASE							
803	Telefonos de Mexico ADR	TMX	56	3	3	1.40	65-100	(15-80%)	13.3	1.6	4.22	.87	60	9/30	1.01	1.05	9/30	.451	NIL	3	CBO							
763	Telephone & Data	(ASE) TDS	47	4	3	.80	55-80	(15-70%)	NMF	0.9	.49	.42	40	9/30	NIL	.31	12/31	.105	.10	3	PAC							
787	Tellabs, Inc.	(NDQ) TLAB	54	2	3	1.40	55-80	(0-50%)	37.0	NIL	1.46	NIL	5	9/30	.34	.25	12/31	NIL	NIL	2	PAC							
1046	Telxon	(NDQ) TLXN	24	2	4	.95	30-50	(25-110%)	24.5	NIL	.98	.01	27	9/30	.15	d.29	12/31	NIL	NIL	2	CBO							
936	Temple-Inland	TIN	52	5	3	.95	45-70	(N-35%)	25.4	2.6	2.05	1.37	89	9/30	.22	.59	12/31	.32	.32	4	ASE							
385	Templeton Emerg'g	EMF	17	4	4	1.25	30-50	(75-195%)	NMF	1.8	NMF	.30	82	8/31	20.67(q)	17.26(q)	9/30	.31	NIL	3	ASE							
673	Tenet Healthcare	THC	32	3	3	1.00	35-55	(10-70%)	18.3	NIL	1.75	NIL	39	8/31	.38	.32	12/31	NIL	NIL	3	ASE							
1340	Tennant Co.	(NDQ) TANT	36	3	3	.40	40-60	(10-65%)	14.4	2.0	2.50	.72	64	9/30	.60	.50	12/31	.18	.18	3								
120	Tenneco, Inc.	TEN	39	-	3	NMF	60-90	(55-130%)	14.6	3.1	2.68	1.20	77	9/30	.62	.45	12/31	.30	NIL	-	ASE							
1078	Teradyne Inc.	TER	32	2	3	1.55	50-70	(55-120%)	14.9	NIL	2.15	NIL	23	9/30	.45	.23	12/31	NIL	NIL	1	PAC							
1921	Terra Inds.	TRA	13	4	3	.70	13-19	(0-45%)	11.8	1.5	1.10	.20	87	9/30	.20	.32	12/31	▲.05	.04	5	CBO							
423	Tesoro Petroleum	TSO	16	3	4	.90	17-30	(5-90%)	13.2	NIL	1.21	NIL	72	9/30	.30	.41	12/31	.30	NIL	2	PHL							
424	Texaco Inc.	TX	54	3	1	.65	60-70	(10-30%)	15.8	3.3	3.41	1.80	72	9/30	.91	.79	12/31	.45	.425	4	ASE							
900	Texas Inds.	TXI	45	1	3	.80	45-70	(0-55%)	10.8	0.7	4.15	.30	8	11/30	1.07	.79	12/31	.075	.05	2								
1069	Texas Instruments	TXN	44	3	3	1.50	60-85	(35-95%)	18.3	0.9	2.41	.40	28	9/30	.60	.04	3/31	.085	.085	2	CBO							
731	Texas Utilities	TXU	41	4	3	.75	30-50	(N-20%)	14.3	5.4	2.87	2.21	90	9/30	1.24	1.59	3/31	▲.55	.525	4	PAC							
1383	Textron, Inc.	TXT	62	3	2	.95	80-105	(30-70%)	17.7	1.8	3.50	1.09	36	9/30	.81	.70	3/31	.25	.22	3	PHL							
386	Thai Fund	TTF	5 1/4	4	4	.95	20-30	(275-465%)	NMF	3.8	NMF	.20	82	6/30	10.71(q)	24.62(q)	9/30	.063	NIL	5								
1384	Thermedics Inc.	(ASE) TMD	17	3	3	1.05	25-40	(45-135%)	23.0	NIL	.74	NIL	36	9/30	.17	.15	12/31	NIL	NIL	4	ASE							
1385	Thermo Electron	TMO	44	2	3	1.25	55-85	(25-95%)	27.2	NIL	1.62	NIL	36	9/30	.41	.32	12/31	NIL	NIL	3	NYS							
1386	Thermo Fibertek	(ASE) TFT	12	3	3	1.05	20-30	(65-150%)	28.6	NIL	.42	NIL	36	9/30	.06	.07	12/31	NIL	NIL	3	PHL							
1387	Thermo Instrument	(ASE) THI	34	2	3	1.20	40-55	(20-60%)	28.6	NIL	1.19	NIL	36	9/30	.28	.23	12/31	NIL	NIL	3	ASE							
569	Thiokol Corp.	TKC	82	2	3	.85	80-120	(N-45%)	13.8	1.0	5.95	.80	41	9/30	1.40	.64	12/31	▲.20	.17	2	PHL							
1020	Thomas & Betts	TNB	47	3	2	.80	60-80	(30-70%)	15.9	2.4	2.95	1.12	75	9/30	.73	.63	3/31	.28	.28	3	ASE							
869	Thomas Inds.(e)	TII	20	3	3	.90	25-40	(25-100%)	14.0	1.5	1.43	.30	65	9/30	.43	.37	3/31	▲.075	.067	3								
1846	Thomson Corp.	(TSE) TOC	39	3	3	.80	35-55	(N-40%)	41.5	2.2	.94	.87	56	9/30	.56	.40	12/31	▲.155	.145	3								
1557	Thor Inds.	THO	34	2	3	.80	35-50	(5-45%)	13.6	0.4	2.50	.12	6	10/31	.74	.59	3/31	.03	.03	3								
1114	3Com Corp.	(NDQ) COMS	36	3</																								

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PAGE NUMBERS		Timeliness		Rank for Safety				Industry Rank				Technical Rank				Where Options Trade		
Bold type refers to Ratings and Reports; Italics to Selection & Opinion		Recent Price		Beta	Estimated Range of 3-5 yr. average prices 2000-2002	Current P/E Ratio	% Est'd Yield next 12 mos.	Est'd Earnings 12 mos. to 6-30-98	(%) Est'd Div'd next 12 mos.	LATEST RESULTS								
NAME OF STOCK	Ticker Symbol									Qtr. Ended	Earnings Per sh.	Year Ago	Qtr. Ended	Latest Div'd	Year Ago			
1891 Transocean Offshore	RIG	45	2 3	.75	80-115	(80-155%)	20.8	0.3	2.16	.13	1	9/30	.39	.31	12/31	.03	.03	1 ASE
586 TransTechnology	TT	28	3 3	.80	30-45	(5-60%)	12.8	0.9	2.19	.26	25	9/30	.45	.35	12/31	.065	.065	3
1143 2163 Travelers Group	TRV	54	2 3	1.85	55-85	(0-55%)	17.1	0.9	3.15	.46	13	9/30	.75	.55	12/31	.10	.075	2 PHL
2191 Tri-Continental	TY	27	3 2	.95	40-55	(50-105%)	NMF	2.8	NMF	.75	66	8/30	33.30(q)	29.57(q)	9/30	.30	.17	3 PHL
1548 Triarc Cos. 'A'	TRY	27	Δ 2 4	1.05	20-35	(N-30%)	38.6	NIL	.70	NIL	52	9/30	.35	1.50	12/31	NIL	NIL	2 ASE
1848 Tribune Co.	TRB	61	3 2	1.05	60-80	(N-30%)	24.0	1.0	2.54	.64	56	9/30	.60	.50	12/31	.16	.15	3 CBO
331 TRICON Global Rest's	YUM	29	- 3	NMF	40-50	(40-70%)	19.9	NIL	1.46	NIL	35	9/30	.56	NA	12/31	NIL	NIL	-
390 1341 TriMas Corp.	TMS	34	- 3	.80	35-55	(5-60%)	18.4	0.9	1.85	.30	64	9/30	.42	.37	3/31	.07	.06	- PHL
587 Trinity Inds.	TRN	45	1 3	1.25	55-80	(20-80%)	13.2	1.6	3.41	.70	25	9/30	.84	.72	3/31	.17	.17	2 ASE
1868 Triton Energy	OIL	30	4 3	.85	55-90	(85-200%)	NMF	NIL	.18	NIL	59	9/30	d.04	.23	12/31	NIL	NIL	4 PHL
529 Trizec Hahn	TZH	23	- 3	NMF	25-40	(10-75%)	NMF	1.2	.25	.27	74	9/30	d.02	NIL	12/31	NIL	NIL	-
1855 True North	TNO	25	- 3	.70	30-40	(20-60%)	18.4	2.4	1.36	.60	19	9/30	.28	.26	3/31	.15	.15	-
1115 Tseng Labs.	TSNG	1%	3 4	1.55	NMF	(NMF)	NMF	NIL	NMF	NIL	7	6/30	d.09	d.06	12/31	NIL	NIL	3 ASE
1750 Tucson Elec. Pwr.	TEP	18	3 5	.90	14-25	(N-40%)	9.4	NIL	1.91	NIL	88	9/30	1.35	3.19	12/31	NIL	NIL	3 ASE
1625 Tultex Corp.	TTX	3 1/4	5 4	.75	9-14	(130-260%)	11.8	NIL	.33	NIL	55	9/30	.23	.43	12/31	NIL	NIL	5
627 20th Century Inds.	TW	26	3 3	.80	25-40	(N-55%)	14.4	1.5	1.81	.40	62	9/30	.46	.33	12/31	.10	.05	2 CBO
1388 Tyco Int'l Ltd.	TYC	44	2 3	1.20	40-60	(N-35%)	25.3	0.2	1.74	.10	36	9/30	.41	.31	3/31	.025	.025	2 PHL
1499 Tyson Foods 'A'	TSN	20	4 3	.70	20-35	(0-75%)	18.0	0.6	1.11	.12	42	9/30	.22	.07	3/31	.025	.025	3 PAC
274 UAL Corp.	UAL	92	2 3	1.20	95-140	(5-50%)	12.6	NIL	7.32	NIL	4	9/30	3.75	3.85	12/31	NIL	NIL	3 CBO
489 UGI Corp.	UGI	30	3 3	.65	25-40	(N-35%)	19.4	4.8	1.55	1.45	86	9/30	d.34	.4	3/31	.36	.355	4
1206 UNUM Corp.	UNM	54	3 2	1.05	50-70	(N-30%)	20.0	1.2	2.70	.63	32	9/30	.66	.30	12/31	.143	.138	3 ASE
365 USA Waste Service	UW	38	3 3	.70	50-80	(30-110%)	19.8	NIL	1.92	NIL	37	9/30	.47	.32	12/31	NIL	NIL	3 CBO
628 USF&G Corp.	FG	22	4 3	1.00	25-35	(15-60%)	13.8	1.3	1.59	.28	62	9/30	.40	.26	3/31	.07	.05	3 PHL
870 USG Corp.	USG	49	2 4	1.20	45-70	(N-45%)	8.6	NIL	5.73	NIL	65	9/30	1.57	1.15	12/31	NIL	NIL	3 NYS
1586 UST Inc.	UST	36	4 2	.90	35-45	(N-25%)	15.3	4.5	2.36	1.62	63	9/30	.62	.65	12/31	.405	.37	4 CBO
427 USX-Marathon Group	MRO	33	3 3	.80	40-60	(20-80%)	15.1	2.4	2.18	.80	72	9/30	.58	.36	12/31	.19	.19	3 ASE
1402 USX-U.S. Steel Group	X	29	2 3	1.00	50-70	(70-140%)	6.1	4.0	4.78	1.15	81	9/30	1.32	.76	12/31	.25	.25	3 ASE
428 Ultramar Diamond	UDS	31	- 3	NMF	35-50	(15-60%)	12.4	3.5	2.50	1.10	72	9/30	.72	.12	12/31	.275	.275	-
732 Unicom Corp.	UCM	30	3 3	.75	Δ 25-35	(N-15%)	13.8	5.3	2.17	1.60	90	9/30	1.23	1.55	3/31	.40	.40	3 CBO
1641 Unifi, Inc.	UFI	41	3 3	.75	40-65	(N-60%)	19.5	1.4	2.10	.56	26	9/30	.45	.37	12/31	.14	.11	3 CBO
355 UniFirst Corp.	UNF	28	2 3	.90	30-45	(5-60%)	18.1	0.5	1.55	.14	15	8/31	.39	.31	3/31	.03	.03	3
2235 Uniforce					SEE FINAL SUPPLEMENT - PAGE 2235													
1500 Unilever NV (NY Shs)(g)	UN	63	4 1	.75	55-65	(N-5%)	24.0	1.7	2.63	1.10	42	9/30	.74	.76	12/31	.385	.329	3 ASE
1501 Unilever PLC ADR(g)	UL	34	4 1	.75	30-40	(N-20%)	21.5	2.0	1.58	.68	42	9/30	.46	.46	12/31	.233	.212	3
1143 937 Union Camp	UCC	54	3 2	.90	45-65	(N-20%)	33.5	3.3	1.61	1.80	89	9/30	.40	.21	12/31	.45	.45	3 CBO
1244 Union Carbide	UK	43	3 3	1.15	60-90	(40-110%)	10.0	2.1	4.29	.90	67	9/30	1.18	1.08	12/31	.225	.187	4 ASE
733 Union Electric	UEP	43	5 1	.70	35-45	(N-5%)	14.1	5.9	3.05	2.55	90	9/30	1.78	1.78	12/31	.635	.635	4
305 Union Pacific	UNP	63	- 3	NMF	80-120	(25-90%)	23.7	2.7	2.66	1.72	49	9/30	1.00	1.00	3/31	.43	.43	- PHL
1756 464 Union Pacific Res.	UPR	23	3 3	.50	30-45	(30-95%)	17.3	0.9	1.33	.20	84	9/30	.27	.30	3/31	.05	.05	4 CBO
2132 Union Planters	UPC	67	3 3	.90	45-65	(N-9%)	18.5	2.5	3.62	1.68	58	9/30	.90	.38	12/31	.40	.27	3 PHL
1869 Union Texas Petr.	UTH	21	3 3	.80	30-50	(45-140%)	18.9	1.0	1.11	.20	59	9/30	.23	.39	12/31	.05	.05	3 PHL
1116 Unisys Corp.	UIS	13	2 5	1.10	20-35	(55-170%)	20.8	NIL	.63	NIL	7	9/30	.13	d.09	12/31	NIL	NIL	1 ASE
2164 United Asset Mgmt.	UAM	25	5 3	1.10	35-55	(40-120%)	18.2	3.2	1.37	.80	13	9/30	.32	.32	3/31	.20	.17	4 PAC
1342 United Dominion Ind.	UDL	35	3 3	.80	45-70	(30-100%)	17.1	0.8	2.05	.28	64	9/30	.60	.58	12/31	.07	.05	4
1190 United Dominion Rty	UDR	14	3 3	.65	20-30	(45-115%)	17.9	7.4	.78	1.04	74	9/30	.20	.13	12/31	.253	.24	5
674 United HealthCare	UNH	49	2 3	1.60	85-125	(75-155%)	22.9	0.1	2.14	.03	39	9/30	.57	.45	12/31	NIL	NIL	3 CBO
197 United Illuminating	UIL	45	3 4	.70	30-45	(N-0%)	13.0	6.4	3.45	2.88	85	9/30	1.68	1.27	3/31	.72	.72	3
570 United Industrial Corp.	UIC	11	2 3	.70	10-14	(N-25%)	17.5	2.9	.63	.32	41	9/30	.17	.01	12/31	.08	.05	2
387 United Kingdom Fund	UKM	14	4 3	.90	25-40	(80-185%)	NMF	2.9	NMF	.40	82	9/30	16.45(q)	15.91(q)	9/30	.40	.21	5
648 U.S. Bancorp	USB	112	3 3	1.10	105-155	(N-40%)	27.0	1.8	4.15	2.00	31	9/30	d.20	.99	12/31	.465	.412	3 ASE
532 766 U.S. Cellular	USM	32	- 3	.75	50-70	(55-120%)	23.5	NIL	1.36	NIL	40	9/30	.37	.28	12/31	NIL	NIL	-
366 U.S. Filter	USF	30	2 3	1.25	50-75	(65-150%)	23.1	NIL	1.30	NIL	37	9/30	.29	.13	12/31	NIL	NIL	3 CBO
1137 U.S. Office Products	OFIS	18	1 4	2.05	35-60	(95-235%)	15.4	NIL	1.17	NIL	18	10/31	.29	.23	12/31	NIL	NIL	2 CBO
245 U.S. Surgical	USS	29	3 4	1.15	35-60	(20-105%)	17.4	0.6	1.67	.16	34	9/30	.43	.39	12/31	.04	.02	4 ASE
2133 U.S. Trust	USTC	64	2 3	.90	45-70	(N-10%)	25.4	1.0	2.52	.64	58	9/30	.61	.48	3/31	.15	.125	3
1434 767 U S West Commun.	USW	45	3 2	.75	40-55	(N-20%)	17.2	4.8	2.62	2.14	40	9/30	.66	.59	12/31	.535	.535	3 ASE
1434 768 U S West Media Group	UMG	28	3 3	1.10	Δ 30-45	(5-60%)	NMF	NIL	d.85	NIL	40	9/30	d.26	.04	12/31	NIL	NIL	3
1138 United Stations	USTR	49	1 4	.95	40-75	(N-55%)	16.3	NIL	3.00	NIL	18	9/30	.74	.56	12/31	NIL	NIL	1
1389 United Technologies	UTX	72	3 1	1.15	105-125	(45-75%)	16.7	1.7	4.32	1.24	36	9/30	1.16	.97	12/31	.31	.275	4 CBO
1409 United Water Res.	UWR	20	4 3	.55	15-25	(N-25%)	18.3	4.6	1.09	.92	80	9/30	.47	.49	12/31	.23	.23	4
990 2179 Unitrin, Inc.	UNIT	63	4 2	.80	70-95	(10-50%)	15.9	4.0	3.97	2.50	57	9/30	.99	1.02	12/31	.60	.55	3 CBO
1070 Unitrode Corp.	UTR	17	2 3	1.25	30-50	(75-195%)	15.5	NIL	1.10	NIL	28	10/31	.35	.21	12/31	NIL	NIL	1 PHL
1436 1587 Universal Corp.	UVV	41	2 3	.80	45-70	(10-70%)	11.7	2.9	3.50	1.17	63							

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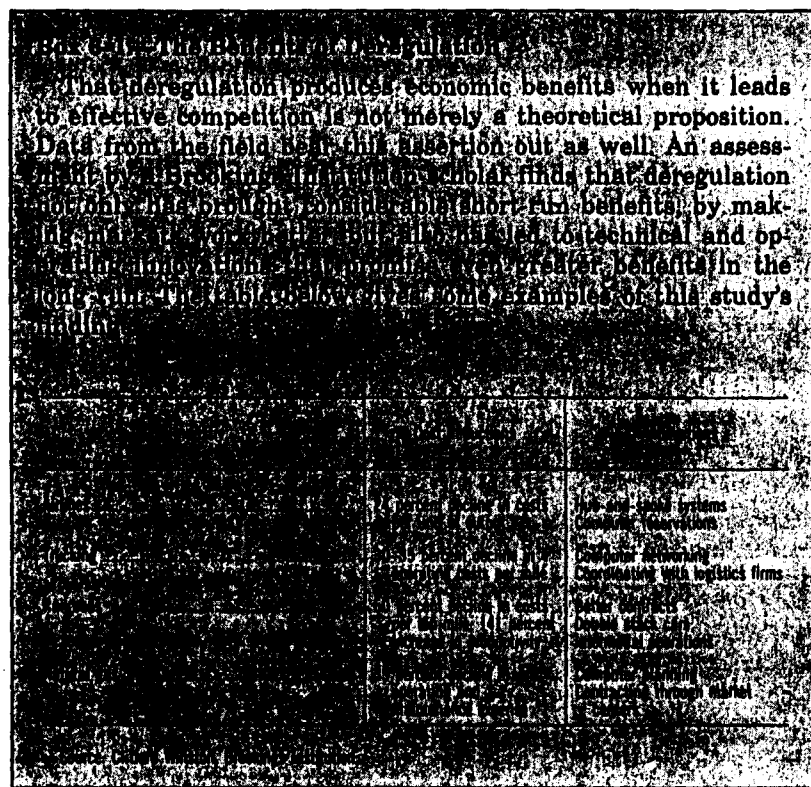
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meet the public's demand for communication services, the Federal Communications Commission (FCC) has turned to auctioning off portions of the electromagnetic spectrum. These auctions not only have been enormously successful in getting licenses quickly into the hands of those who can use them most efficiently, but have raised over \$20 billion for the U.S. Treasury in the process. A second success story has been the use of market forces to provide greater flexibility in meeting environmental goals (e.g., tradable permits for sulfur dioxide emissions). Last but not least, market forces can help improve the management, use, and disposal of public lands.



MARKETS, GOVERNMENTS, AND COMPLEMENTARITY

As a prelude to discussing the potential for complementarity between private markets and the public sector, we review the purposes each serves in a primarily market-driven economy.

THE ADVANTAGES OF MARKETS

The argument in favor of deferring to markets typically relies on the efficiency of their outcomes. If markets are competitive and function smoothly, they will lead to prices at which the amount sellers want to supply equals the amount buyers demand. Moreover, the price in any market will simultaneously equal the benefit that buyers get from the last unit consumed (the marginal benefit) and the cost of producing the last unit supplied (the marginal cost). These two conditions ensure efficiency: when they hold in all markets, the Nation's labor and resources are allocated to producing a particular good or service if and only if consumers would not be willing to pay more to have those resources employed elsewhere.

This familiar story is profound and important, yet it understates the role of private markets in making economies work. Since at least the 1930s, economists have noted that in theory the government could reach efficient outcomes without relying on markets, if government officials had sufficient information and the right incentives. But it is markets' superior information-processing ability and preservation of individual incentives that explain their general superiority to government management of the economy. Markets allow transactions to be decentralized to the level where decisions are made by those most affected by them, in direct response to budget constraints and tradeoffs. Market participants themselves then have powerful incentives to generate and gather information and make the deals that best serve their interests.

Information

An insufficiently appreciated property of markets is their ability to collect and distribute information on costs and benefits in a way that enables buyers and sellers to make effective, responsive decisions. Because market prices measure the marginal benefits of goods and services to consumers, firms that maximize their profits simultaneously maximize the difference between benefits and costs. Similarly, consumers look to market prices to decide which goods and services to purchase, and how to use their labor, resources, and financial wealth to generate the income to pay for them. As tastes, technology, and resource availability change, market prices will change in corresponding ways, to direct resources to the newly valued ends and away from obsolete means. It is simply impossible for governments to duplicate and utilize the massive amount of information exchanged and acted upon daily by the millions of participants in the marketplace.

That markets normally process all of this information so well and so rapidly tends to be taken for granted. In light of all the investments, hires, plans, purchases, marketing efforts, sales, contracts, and exchanges necessary to bring goods to market, the fact that the price system normally works as well as it does—for instance, that

TABLE 6-1.—*The Interconnection Debate*

Entry method	Entrant side	Incumbent side	FCC policy (absent a negotiated agreement between the parties)
Facility-based total service providers	Incumbent would preserve monopoly by refusing to interconnect.	Act left interconnection to bilateral negotiation; FCC intervention will give too little weight to local market considerations.	Set basic rules for interconnection between existing local telephone companies and new end-to-end providers.
Purchase of "network elements"	Incumbent would offer too few elements at too high a price.	Entrants demand inefficient slicing of network; rates based on forward-looking costs will not provide enough revenue to pay for past investments.	Determine the "network elements" (loops, switches, other components) incumbent carriers should make available; specify cost-based methods for setting their prices.
Resell incumbent's service at retail; own no facilities	Wholesale discounts below retail rates are necessary for profitable retail competition.	Resellers should not get service at prices discounted from retail rates that, because of regulation, are below the cost of providing service.	Set a default wholesale discount of 17-25 percent below retail, based on estimates of incumbents' costs related to retailing that incumbents would avoid.

Source: Council of Economic Advisers, based on Federal Communications Commission interconnection order.

tance service, in accord with the checklist and the "public interest" standard in the Telecommunications Act.

While the interconnection issue is pending, the Joint Board of FCC and State Public Utility Commissioners has adopted recommendations for funding universal service subsidies for telephone service to low-income or high-cost (generally rural) areas through competitively neutral contributions from interstate telecommunications service providers. The proposal defines universal service as including basic voice telephone service and ancillary services. The current practice of subsidizing universal service through "access charges" (fees that long-distance companies pay the local incumbent to originate and terminate calls) is neither transparent nor likely to be sustainable in a competitive environment, as the entry of new telephone companies fosters bypass of the payment system. In December 1996 the FCC initiated proceedings to reform access charges. It is proposing to prescribe specific changes in access charges and/or to grant a local telephone company different degrees of pricing flexibility depending upon whether it faces potential entry, actual competition, or substantial competition.

One question in addressing universal service and access charges is whether, after deregulation, the earnings of incumbent telephone companies will suffice to cover the infrastructure costs mandated under prior regulatory regimes. As last year's *Economic Report of the President* argued in the context of "stranded costs" of electric utilities (which are discussed further below), recovery of costs le-

utilities (which are discussed further below), recovery of costs legitimately incurred pursuant to regulatory obligations would be warranted. Such recovery should be limited, however, to investment expenses not already recovered through past earnings. It is also crucial that any such recovery be accomplished in a manner that is competitively neutral—for example, creating neither artificial price nor cost advantages for the incumbent carrier.

The years of debate that preceded passage of the Telecommunications Act are likely to presage additional years of regulation and litigation to realize its goals. These complex issues will require active policy oversight to ensure a proper outcome.

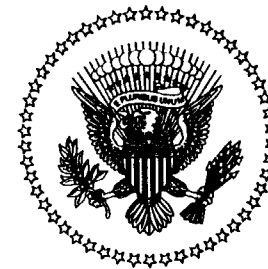
EXPANDING COMPETITION IN ELECTRICITY: FEDERAL ORDERS AND STATE INITIATIVES

Telecommunications was not the only industry during the past year to be the object of procompetitive policy initiatives. Major regulatory decisions by the Federal Energy Regulatory Commission, along with ambitious State initiatives, are already opening markets in electric power generation to competition. Legislation to increase competition in electric power markets is under active consideration by the Congress and the Administration. (Box 6-6 discusses the important role of merger enforcement during the transition to competition in the electricity and telephone industries.)

The 1992 Energy Policy Act authorized the FERC to order a transmission-owning utility to provide wholesale transmission service. This enabled generators owned by the transmission utility, by other utilities, or by independent power producers to compete to sell power to local distribution companies or anyone else engaged in the resale of electricity. Opening up wholesale markets and interstate transmission networks to the panoply of generating companies should lower prices and will be necessary for effective retail competition. State regulators are now determining the extent to which competition in electricity may extend to retail markets.

The key provisions of the FERC's Order No. 888, issued April 24, 1996, require public utilities to file nondiscriminatory "open access" tariffs for the interstate transmission of electricity sold at wholesale. Order No. 888 also requires "functional unbundling" by utilities of generation from transmission, with separate rates for wholesale power, transmission service, and other ancillary services. These tariffs are intended to ensure that the utility treats nonaffiliated power companies the same way it treats its own generators in terms of prices and service options. To implement these procedures, Order No. 889 mandates the creation of Open Access Same-Time Information Systems (OASIS) to provide all generators with up-to-the-minute data regarding power flows and congestion in the transmission network. The thrust behind these two orders is the

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Box 6-2.—The Electric Power Industry

Four main types of electric utilities operate in the United States: investor-owned utilities, which are typically privately owned, regulated monopolies; non-Federal publicly owned utilities, which are nonprofit State and local government agencies established to serve their communities and nearby customers at cost; cooperative utilities, which are owned by and provide electricity to their members; and Federal power agencies, which are primarily electricity producers, wholesalers, and transmitters. Although only about 250 out of the 3,204 electric utilities nationwide in 1994 were investor-owned, they are by far the most economically significant group, earning almost 80 percent of all electricity revenues. Over 99 percent of investor-owned utilities' revenues accrued to the 179 largest utilities.

Total electricity revenues in 1994 were \$203 billion, or about 3.2 percent of gross domestic product (GDP). Of that sum, residential users accounted for almost \$85 billion, commercial users for about \$63 billion, and industrial users for \$48 billion. The electric utility industry is one of the most capital-intensive in the United States; the 179 largest investor-owned utilities alone had almost \$575 billion in assets in 1994, amounting to almost 5 percent of the gross capital stock of all industries.

Competition typically offers important advantages over monopoly: it encourages innovation, which lowers costs and increases the variety of products available to consumers. And *regulated* monopolists generally have weaker incentives than unregulated monopolists to cut costs, to launch new products, and to respond to changing customer demands. In addition, there are administrative costs of regulation and, more important, the potential for losses due to protracted disputes between the regulated firm, customers, and regulators, which can cause long delays in adjusting prices or in authorizing new investments.

The bottom line is that competition need not be perfect for it to be preferable to regulated monopoly. The advantages of competition can easily outweigh the disadvantage of not fully exploiting economies of scale.

ADAPTING REGULATION TO INCREASE COMPETITION

Although regulation has been the primary tool for addressing monopoly in infrastructure industries, these industries have also been subject to antitrust rules in some aspects of their operation, such as interconnection in the case of the telephone industry. Regulation and antitrust have had an uneasy coexistence, given their somewhat inconsistent thrusts: antitrust encourages competition

but for the most part does not attempt to control a firm's prices, investments, and technology choices, whereas regulation does attempt to control such decisions and often restricts entry into the industry as well, thereby reducing competition. The difficulties in reconciling these approaches, and the distortions that stem from regulating monopolies, have created growing support for moving toward a more integrated competition-cum-antitrust regime.

Regulatory reforms in the 1970s and 1980s demonstrated that largely unregulated competition yields more efficient performance in such traditionally regulated industries as air transport and trucking, natural gas production, and long-distance telephone service. More recently, technological advances have further increased the scope for competition in local telephone and cable service and in the electric power industry. Regulatory regimes should adapt to changing conditions, to help shrink the boundaries of the regulated sector and rely more on competition.

Removing Legal Entry Barriers

The need for regulatory reform is nowhere more glaring than in telecommunications, with its blistering pace of technological change. Several technologies may in the future offer economical alternatives to today's local telephone network. Cable companies are experimenting with upgrading their existing lines to deliver telephone service. Wireless technologies now used mainly for mobile communications might also be used for ordinary telephone service if costs fall sufficiently. Fiberoptic lines, now used principally by companies that specialize in providing access to long-distance carriers, could be extended to homes and businesses. Mobile telephone service from low-orbiting satellites could eventually provide basic local service. Similarly, large-scale competition to cable companies in delivering video services may come from various sources including satellites, wireless land-based technologies, or telephone companies upgrading their networks. Meanwhile the rapid technological change that is blurring industry boundaries in telecommunications is also leading to the emergence of hybrid services such as multimedia, which defy easy classification into traditional industry definitions.

With so much uncertainty about the shape of the communications networks of the future, and with significant potential for competition, the best course is to leave their evolution to be determined by the private sector. Policymakers should not attempt to prejudge the outcome by assuming that local telephone and cable service are natural monopolies best provided by regulated franchise monopolists. Attempts to preserve artificial industry lines for the sake of maintaining regulation under traditional monopoly franchises become arbitrary, futile, and counterproductive.

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Special Report 230

Winds of Change

Domestic Air Transport Since Deregulation

TRANSPORTATION RESEARCH BOARD
NATIONAL RESEARCH COUNCIL
Washington, D.C. 1991

FOOTNOTE: 5

Dakota, and New York City), in which virtually all trips were likely to have involved a large carrier for at least part of the journey. For this analysis, the small community was defined even more broadly than before to include many small cities with up to 500,000 enplanements in 1988.

The purpose of this analysis was to determine if average yields in small-community markets varied significantly from those in larger markets during the sample period of 1988 to 1989. Each of the 160 small-community city pairs was grouped by mileage block, along with the remaining 635 city pairs. The average yields in each of the small-community categories and the other categories were then compared.

As shown in Table 3-19, the results from this analysis show yields in small communities that are not noticeably different from those in

TABLE 3-19 AVERAGE YIELD IN SMALL-COMMUNITY CITY PAIRS VERSUS ALL OTHERS, 1988-1989

Market Type	Yield (cents per mile) by Distance (miles)				
	100- 499	500- 999	1,000- 1,499	1,500- 1,999	2,000 +
Small community	38.4 (N = 62)	21.3 (N = 40)	13.4 (N = 35)	10.4 (N = 12)	10.0 (N = 11)
Other	35.9 (N = 148)	21.3 (N = 165)	12.8 (N = 95)	11.1 (N = 123)	9.5 (N = 104)
Percent difference	+7	0	+5	-6	+5

NOTE: Small-community city pairs include one or more small cities, which are defined as having fewer than 500,000 enplanements per year. However, because of insufficient fare information for very small cities, only 20 city pairs involving cities with fewer than 100,000 enplanements are included in the sample. Data are for the last two quarters of 1988 and the first two quarters of 1990. N = sample size.

SOURCE: DOT O&D Survey.

other markets. For most markets sampled, the difference in yield was typically less than 10 percent, suggesting that on many long- and medium-haul trips (which usually involve a connection at a larger hub or spoke airport), travelers from small communities may be benefiting from the same efficiencies of hub-and-spoke systems as travelers from much larger markets.

SUMMARY

General Trends

Deregulation brought changes to the airline industry that have produced substantial benefits to air travelers. More travelers are flying now than ever before: the number of annual passenger trips (which excludes connecting enplanements) has increased by nearly 100 percent since 1977. This growth in travel has been accompanied by—and largely stimulated by—reductions in the fares paid by passengers. After adjustments are made for inflation, the average passenger yield (fare divided by miles traveled) fell by about 15 percent between 1979 and 1989. This decline occurred despite several external events that caused sharp increases in airline costs, which probably would have resulted in even higher fares had the previous system of fare and route regulation continued.

Overall, the pattern of fare and service changes since deregulation has been fairly consistent with prederegulation predictions. Fare and service options are much greater than before deregulation, resulting in a wider variety of fares. Hence, today approximately 25 percent of passengers are paying fares that are much higher (2.5 times higher) than the industry average yield compared with 19 percent 10 years earlier. By comparison, however, 15 percent of passengers are paying less than half the industry average fare, which is three times more than in 1979. Altogether, more than three-fourths of travelers are flying in markets that have experienced real fare declines since deregulation. The principal beneficiaries have been travelers in medium- and longer-distance markets, who have benefited from the elimination of fare cross subsidies (which favored short-haul travel) and from the proliferation of competing hub-and-spoke systems. On average, travelers in longer-distance markets (more than 1,000 miles) have enjoyed real fare declines of 10 to 35 percent.

Effects of Competition on Fares and Service

In recent years fares have climbed upward slightly throughout much of the airline industry. This trend toward somewhat higher fares has coincided with an increase in airline costs as well as an increase in airline concentration nationally and in many individual cities and city-pair

Stranded by Airline Deregulation

Some Cities Cite Economic Hardships Caused by High Fares, Limited Service

By Frank Swoboda

Washington Post Staff Writer
Saturday, January 2, 1999; Page F01

CASPER, Wyo. — Even the dead here are finding it expensive to fly back home.

When a body is returned to Casper for burial, funeral director Bob Bustard has a problem: The planes that fly here are too small. Caskets are too heavy, and even the lighter cardboard containers used to ship human remains are too big to fit on the planes. So about once a month Bustard has to send a hearse to the Denver airport to pick up or deliver a casket, adding \$325 to the cost of a burial. He charges \$1 per "covered mile."

Before airline deregulation two decades ago, Casper was served by full-size jets, with large cargo holds and seats for more than 120 people, and by routes and fares dictated by the federal government. Today, Casper is served only by commuter turboprops that can carry about 35 passengers and their luggage -- and charge sky-high fares.

Isolated on the high plains of the West, north of Denver and south of nowhere, this rural community of 65,000 has become ground zero in an emerging war over airline competition.

Nearly everyone seems to agree that unfettered competition in the airline industry has, for most Americans, resulted in lower fares and more choices and service. But a 20-year trend has left communities such as Casper -- and even bigger cities such as Des Moines -- with poor service and high fares that officials say are driving away companies and harming local economies.

Now the Clinton administration is promoting a plan -- fiercely resisted by major airlines -- that for the first time since deregulation would make the federal government a sort of referee, able to step in and improve the situation. Airlines argue that this plan would result in creeping reregulation, but officials in cities with poor air service see it as a way to win a fighting chance at equal treatment. For example, the government could encourage greater competition on routes dominated by single carriers or stifle potentially unfair competition directed at start-up carriers.

While fighting the Clinton administration's plan, some airlines have begun to recognize that they might have to adjust prices in response to community concerns. In March, United Airlines Chairman Gerald Greenwald met with a delegation of Des Moines business leaders at the airline's Chicago headquarters and agreed to reduce the round-trip, walk-up fare between the two cities to \$513 for an indefinite test period. United dominates the 299-mile Chicago-to-Des Moines route and had charged as much as \$800. Air fares still are considerably lower in Omaha, a two-hour drive west of Des Moines, because of the presence of Southwest Airlines, the nation's premier low-fare carrier.

Yet no one has found a way to guarantee that a vibrant free market would give Casper back its full-size jets or let Des Moines have fares as cheap as Omaha's, a situation that some experts said will leave these communities at as great an economic disadvantage in the future as towns that were skirted by interstate highways after World War II or by railroads at the turn of the century.

"If you don't have good air service," said Gordon Jenkins, president of First Interstate Bank in Casper, "you might as well put up a 'closed for business' sign." He said the problem for his city and other small communities is that "there are three or four species of big game that outnumber the people of the state -- and they don't fly."

For five days last winter, Rub Monroe's flowers sat in below-freezing temperatures on a loading dock at Denver International Airport, waiting for enough room in the cargo hold of the small United Express plane that flies to Casper. "Our flowers are being bumped by passenger luggage," complained Monroe, owner of Nate's Flowers and Gifts in Casper. During the past 20 years, Monroe said, his business's profit margin has shrunk from 10 percent to 4 percent, which he attributes entirely to deteriorating air service.

Before deregulation in 1978, all fares were set by the government, and there was little variation in price among carriers. But the economics of deregulation -- the greatest demand helps create the lowest fares -- have created pricing variations that are maddening to the people of Casper.

Now, a single carrier -- United Express -- serves Casper from Denver, and another carrier -- SkyWest -- handles the route to Salt Lake City. So people in Casper have no choice but to pay \$398.17 for a round-trip walk-up ticket for the 300-mile trip to Denver.

Roy Cohee, owner of C&Y Transportation Co. and a newly elected member of the Wyoming state legislature, said that five years ago, he and his wife took a vacation trip to Ireland, where the round-trip ticket for the one-hour flight from Casper to Denver cost each of them \$320. The round-trip ticket for the nine-hour flight from Denver to Dublin was \$450.

Transportation Secretary Rodney E. Slater argues that deregulation has created "pockets of pain" throughout the country. For the good of the U.S. economy, Slater said, the government must foster more competition.

But the airlines counter that the Clinton administration's remedies would stifle competition. "It's real regulation, it's the essence of regulation," said Michael E. Levine, an executive vice president at Northwest Airlines. "What they're trying to do is tie us down, but lightly. It's light bondage."

Under guidelines proposed last year, the Clinton administration said, it would be easier for small and mid-size cities such as Casper and Des Moines to attract start-up airlines -- without the threat of major carriers snuffing them out by selling tickets below cost and boosting capacity until they are driven out. Essentially, established airlines would be required to maximize profits at all times and could no longer "dump" prices to gain market share.

The Transportation Department claims that in Des Moines, United Airlines matched the fares of upstart Vanguard Airlines, which dipped as low as \$78 for a one-way trip to Chicago, and then boosted the round-trip fare to more than \$800 once Vanguard left.

The guidelines also take aim at "fortress hubs," where a single carrier dominates traffic to a major regional airport. Denver International, the major hub for air service to Wyoming, is dominated by United, which has 65 percent of the traffic.

A hub airport is like the center of a wheel: Traffic from outlying parts of the region is carried, often in small planes, down the spokes of the wheel to the hub, where service is available to anywhere in the world. But people out on the end of the spokes often pay a high price.

John Robson, chairman of the Civil Aeronautics Board in the Ford administration, who is credited with initiating deregulation, wrote this spring in the magazine *Regulation* that the type of price competition the Clinton administration wants to control has helped push down ticket prices.

"One of the reasons air fares have declined over the past 20 years is the practice of established carriers to fight aggressively for customers by meeting the competitive challenge of new rivals in the marketplace," Robson wrote, adding, "This is the way free markets are designed to work."

That's what worries Todd Ennenga, 35, who earlier this year abandoned a promising career as a brand manager with Philip Morris Cos. in New York to return to the tranquillity of his hometown, where he is executive director of the Casper Area Chamber of Commerce. Ennenga has made the air-service issue his cause, convinced it is the key to Casper's growth. "The stakes are just too high in economic development for us not to have good air service," Ennenga said.

George Howley, president of the Casper Area Economic Development Alliance, which helps lure businesses to the region, said, "We have gone back and looked at the companies that considered Casper, and air service is always one of the top issues."

He said Casper lost a bid for a Nationwide Insurance facility with 2,500 jobs because of the poor quality of air service. "We came in third because managers couldn't get in and out easily, and they considered it an inconvenience," Howley said.

And even when a company decides to relocate to the area, Howley said, the poor air service often keeps the good jobs elsewhere. He pointed to Boise Cascade Corp., which is building a data-processing center in Casper that eventually could employ as many as 500 people. But the company, after many visits to the site and a careful review of Casper's air service, decided not to build a training center here as well. "With the cost of air service, they decided it wasn't feasible," Howley said.

John Philp, United's representative in Denver, said his airline is providing Casper with 402 seats a day, one way, but nearly half fly empty. Philp said Casper and Jackson are strong markets for Wyoming, but they are small in the larger scheme of things.

"There are only 460,000 people in the whole state," Philp said. "Everybody wants more service and more jets if they can, but the economics are tough to justify when only 250,000 passengers left Wyoming last year. You've got to size your product to your demand."

Philp called the economic-development arguments made by people like Ennenga and Howley a "chicken-and-egg" debate. "It's mostly an economic-development argument that if you provide more seats, you'll get more people and more business," he said. But even if United Express were to provide more passenger seats, Philp said, the airline would probably not increase freight capacity.

In Des Moines, the verdict is still out on the success of the lower United fare to Chicago in attracting business passengers. Some business leaders argue that ticket prices are still too high. The airline's initial results show a slight rise in the number of passengers carried, accompanied by a slight decline in profits from leisure passengers attracted by corresponding lower rates generated by the negotiated fare.

Although Des Moines is served by several airlines, Miller and others said real competition is the answer to the city's air-service woes.

"This issue is about jobs outside the major metropolitan areas of this country," said Douglas Siedenburgh, who heads the Siedenburgh Group, a real estate investment and consulting firm in Des Moines. "The answer can't be solved by negotiating with one airline at a time."

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Telecommunications Services

Regulatory issues on the front burner

Highlights

In this note we analyze some regulatory issues with investment significance to the telecommunications industry.

We expect the drafting of an FCC reauthorization bill to begin soon. Commerce Committee Chairman John McCain may press the FCC for less restrictive industry regulation which could, if successful, be of some benefit to the RBOCs.

Much remains to be done on the large LEC high-cost Universal Service Fund, but we believe that congressional advocacy for rural states will be a strong factor in producing a fund size that is at least \$10 billion, essentially splitting the difference between RBOC and long-distance industry desires.

A recent white paper from the FCC's Office of Plans and Policy suggests the potential desirability and legal obligation of requiring common carrier status for cable operators that offer advanced services such as Internet access, a new and potentially negative development for the cable television industry but not as bad for AT&T's.

FOOTNOTE: 8

At the state level, intraLATA dialing parity is an issue being actively explored at state commissions, given their statutory ability to require RBOCs to implement this in February of 1999.

Regulation of telecommunications is and should continue to be one of the most significant drivers of investment returns in the sector, and we believe that the deck is stacked against the RBOCs. Bell Atlantic (BEL) is the only RBOC stock that offers the level of investment return we require for a Buy rating at this time.

Investment opinion

With Congress back in session, we thought it timely to do an update on some of the major telecommunications industry issues that are on the front burner in the nation's capital. We have done the same at the state level. With few exceptions, regulators have implemented the Telecommunications Act of 1996 in ways that are disadvantageous for the Regional Bell Operating Companies (RBOCs), and we don't see any signs that this is changing much. Although the Bells could get some help during the upcoming FCC reauthorization process, and it looks like they will get a better deal than we previously expected on Universal Service, the ball is not bouncing their way on most big issues in the regulatory arena. In fact, now that the Eighth Circuit Court has ruled against the Bells on shared transport, it seems to us that successful RBOC 271 applications will have to incorporate a "rebundling" or network platform option, meaning that most RBOC operation and support systems (OSS) still have a long way to go in order to pass the 14-point checklist to the satisfaction of the Department of Justice or the FCC. (*) Regulation of telecommunications is and should continue to be one of the most significant drivers of investment returns in the sector, and we believe that the deck is stacked against the RBOCs. Bell Atlantic (BEL) is the only RBOC stock that offers the level of investment return we require for a Buy rating at this time. We believe that the largest beneficiary of industry deregulation is MCI WorldCom (WCOM), our top pick in the telecommunications services sector. We also believe that competitive local exchange carriers (CLECs) such as Advanced Communications Group (ADG), Intermedia Communications (ICIX), Electric Lightwave (ELIX) and GST Telecommunications (GSTX) are positioned to be leading beneficiaries of this change. We also have buy ratings on these stocks.

Issues on the front burner in the nation's capital

FCC reauthorization

We expect the drafting of an FCC reauthorization bill to begin soon, with hearings to start in January. The bill will be drafted by the Commerce Committee, which is chaired by Senator John McCain. McCain's philosophy on regulation is right out of the Chicago School of Economics, and we believe that he may press the FCC for less restrictive industry regulation which could, if he is successful, benefit the RBOCs and the cable television industry. In fact, McCain has such a free-market bias that he was one of only seven senators who voted against the Telecommunications Act of 1996 -- he thought that it was overly regulatory. One of McCain's biggest regulatory beefs has been the restrictions on RBOC long-distance entry and the lack of a date certain. While we doubt that any date-certain language will be attached to the reauthorization bill (because it would not have the necessary political support) and believe that it would be voted down if attempted, McCain could attach an amendment to the bill that includes a definition of public interest in the context of section 271 of the Telecom Act, making it more difficult for the FCC to defend rejections of 271 applications. This would probably be supported by conservatives and RBOC loyalists on the Hill who are upset because they believe that the FCC is using the latitude it has from the ambiguous "public interest" standard which it applies to 271 applications. Some are concerned that the FCC may use the public interest test to reject applications that meet objective standards of entry. As we discuss in the next section, the impact of such a definition is likely muted by the Eighth Circuit ruling against the RBOCs on shared transport. McCain may also seek to define public interest as it pertains to merger reviews, and may look to downsize or eliminate certain bureaus within the FCC. We believe that the cable bureau of the FCC may be fixed in the senator's crosshairs.

(*) Please see appendix for a reprint of our analysis of the shared transport decision.

We believe that even if Senator McCain is successful in defining a public interest standard in the reauthorization process (with a definition that is beneficial to the RBOCs), it will not have as much significance as it did before the RBOCs were defeated on shared transport, which likely means that RBOCs will have to offer the network platform (aka "rebundling" and UNE-P) as a part of the 14-point checklist compliance. Thus the FCC will probably get most of what it wants through the 14-point checklist compliance and will not have to resort to the public interest test.

Supreme Court Case

MCI WORLD COM, INC. NDQ-WCOM

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1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	VALUE LINE PUB., INC.	01-03
..	1.24	1.86	2.18	3.09	4.02	4.80	6.96	9.42	5.07	8.09	17.45	20.85	Revenues per sh	33.75
..13	.18	.27	.39	.53	.73	.49	1.41	.84	1.41	2.95	4.60	"Cash Flow" per sh	8.25
..04	.06	.13	.21	.27	.43	1.03	.65	1.02	.40	.85	2.05	Earnings per sh	4.35
..	Div'ds Decl'd per sh	Nil
..07	.16	.19	.22	.29	.15	.60	.92	.74	2.91	3.60	3.60	Cap'l Spending per sh	3.55
..24	.49	.56	1.17	1.49	6.80	5.72	5.58	14.63	14.85	13.75	14.65	Book Value per sh	22.10
..	42.80	58.88	70.73	85.36	199.04	238.51	319.29	386.49	885.08	909.20	1831.5	1840.0	Common Shs Outst'g	1870.0
..	7.8	9.9	11.5	17.1	19.0	23.3	..	21.2	22.3	74.2	74.2	74.2	Avg Ann'l P/E Ratio	25.0
..85	.75	.85	1.09	1.15	1.38	..	1.42	1.40	4.30	4.30	4.30	Relative P/E Ratio	1.80
..	Avg Ann'l Div'd Yield	Nil

CAPITAL STRUCTURE as of 6/30/99	53.3	109.5	154.4	263.4	800.8	1144.7	2220.8	3639.9	4485.1	7351.4	32000	38400	Revenues (\$mill)	63100
Total Debt \$8975.6 mill. Due in 5 Yrs \$5610 mill.	21.6%	21.1%	23.4%	22.1%	21.5%	24.3%	15.3%	27.1%	26.7%	27.5%	22.5%	30.0%	Operating Margin	34.5%
LT Debt \$8971.1 mill. LT Interest \$500.0 mill.	3.4	6.4	9.4	15.4	53.9	79.9	163.8	311.3	303.3	920.7	3885	4675	Depreciation (\$mill)	7300
(Tot. int. coverage: 3.4x)	2.2	4.3	9.8	17.7	53.9	104.2	19.9	267.7	440.2	383.7	1560	3785	Net Profit (\$mill)	8145
Leases, Uncapitalized Annual rentals \$215.5 mill.	47.5%	45.3%	44.2%	43.0%	43.4%	40.6%	NMF	39.0%	35.3%	52.0%	38.0%	38.0%	Income Tax Rate	40.0%
Pension Liability None	4.1%	3.9%	6.3%	6.7%	6.7%	9.1%	9%	7.4%	9.8%	4.9%	4.9%	9.9%	Net Profit Margin	13.0%
Pfd Stock \$.12 mill. Pfd Div'd \$1.0 mill. (less than 1% of Cap'l)	49.5	45.0	45.8	416.0	14.1	13.0	4121.3	386.1	4365.3	41600	41000	41000	Working Cap'l (\$mill)	1000
Common Stock 1,071,304,490 shs. (63% of Cap'l) as of 7/31/98	43.4	78.8	93.9	150.5	333.7	528.0	788.0	2278.4	4803.6	6527.2	14685	16935	Long-Term Debt (\$mill)	26435
MARKET CAP: \$52.5 billion (Large Cap)	10.2	28.9	38.4	100.1	343.0	1621.7	1827.2	2187.3	12960	13510	25260	27030	Shr. Equity (\$mill)	41400

CURRENT POSITION	1996	1997	6/30/98
Cash Assets	895.2	87.7	84.5
Receivables	1000.0	1199.1	1789.1
Other	300.9	415.8	519.9
Current Assets	2296.1	1682.6	2393.5
Accts Payable	588.7	463.3	448.9
Debt Due	22.4	10.8	4.5
Other	1298.9	1574.0	2038.5
Current Liab.	1910.0	2047.3	2491.9

ANNUAL RATES	Past 10 Yrs.	Past 5 Yrs.	Est'd '95-'97
Revenues	19.5%	NMF	to '01-'03
"Cash Flow"	25.0%	NMF	
Earnings	27.5%	NMF	
Dividends	..	NMF	
Book Value	61.0%	NMF	

1995	865.0	894.7	933.6	946.6	3639.9
1996	1034.1	1073.5	1143.4	1234.1	4485.1
1997	1677.2	1770.1	1901.2	2002.9	7351.4
1998	7550*	7890*	8140	8420	32000
1999	9060	9470	9770	10100	38400
EARNINGS PER SHARE ^A					
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1995	.14	.16	.15	.20	.65
1996	.21	.25	.27	.29	1.02
1997	.05	.08	.12	.15	.40
1998	.12*	.23*	.24	.26	.85
1999	.42	.53	.54	.56	2.05
QUARTERLY DIVIDENDS PAID					
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1994					
1995					
1996					
1997					
1998					
1999					

NO CASH DIVIDENDS BEING PAID

exclude the charges, but we have adjusted the company's 1998 shareholder equity figure. Separately, WorldCom issued \$6.1 billion in senior debt last August to help pay for the purchase of MCI, which required a \$7.0 billion cash outlay to British Telecom for its 20% stake in the Washington, D.C.-based telco. About 760 million shares of MCI WorldCom common stock (\$37.0 billion) were issued as well.

The company recently launched its "pan-European" communications network. In July, this 2000-mile, fiber-optic network connecting 27,000 U.S.

missions. The pan-European network greatly enhances MCI WorldCom's global competitiveness, as does MCI's previous agreement with Telefonica to market international services in Latin America. MCI WorldCom stock offers appealing capital-gain potential to 2001-2003. The company's emphasis on high-margined international and data services, and resulting cost synergies from the integration of WorldCom and MCI operations suggest strong 3- to 5-year revenue and share-net gains.

David M. Reimer October 9, 1998

(A) Basic earnings. Excludes nonrecurring losses: '94, 45c; '96, 94c; '98, 40c. Next earnings report due late October.
 (B) In millions, adjusted for stock splits.
 (C) Merged with MFS Communications, 12/31/96.
 (D) Merged with MCI Communications on 9/1/98.
 (E) Excludes MCI.
 (F) Pro forma estimate, including MCI.
 * Timeliness rank suspended due to the recent acquisition of MCI.

Company's Financial Strength B+
 Stock's Price Stability NMF
 Price Growth Persistence NMF
 Earnings Predictability NMF

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AT&T CORP. NYSE-T										RECENT PRICE	58	P/E RATIO	20.7 (Trailing: 27.1 Median: 16.0)	RELATIVE P/E RATIO	1.39	DIV YLD	2.3%	VALUE LINE	737										
TIMELINESS — Suspended 9/29/95 SAFETY 2 Lowered 7/11/97 TECHNICAL — Suspended 9/29/95 BETA NMF (1.00 = Market)										High: 35.9 30.4 47.0 46.6 40.4 53.1 65.0 57.1 68.5 68.9 64.0 68.5 Low: 22.3 24.1 28.1 29.0 29.0 36.6 50.3 47.3 47.6 33.3 30.8 48.4										Target Price Range 2001 2002 2003									
2001-03 PROJECTIONS										LEGENDS — 8.5 x "Cash Flow" p unit until 12/94 — 8.5 x "Cash Flow" p sh from 01/95 Relative Price Strength Options: Yes Shaded area indicates recession																			
Price 105 Gain 18% Low 75 (+30%) 9%										Ann'l Total										Insider Decisions									
N D J F M A M J J to Buy 0 0 1 0 0 1 1 0 2 Options 2 0 0 3 0 0 0 0 0 to Sell 3 0 0 5 0 0 0 0 1										Percent 6.0 shares 4.0 traded 2.0										% TOT. RETURN 8/98 THIS STOCK 1 yr. 31.5 -11.4 3 yr. 38.9 34.7 5 yr. 31.4 70.3									
Institutional Decisions										4Q1997 1Q1998 2Q1998 to Buy 409 393 424 to Sell 356 397 391 Net (Buy) 692980 770452 778674										1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999									
As of 1996, AT&T's financial results exclude equipment (Lucent Technologies), computer (NCR Corp.), and finance (AT&T Capital) operations. The spinoff of Lucent to shareholders was completed on September 30, 1996. NCR was spun off on December 31, 1996. AT&T Capital was sold to a leasing consortium on October 1, 1996. Citicorp purchased the Universal Card unit on April 2, 1998. The "new" AT&T will focus on the long distance and local telephone markets, and wireless and on-line services.										32.79 33.57 34.14 48.18 48.44 49.66 47.86 49.88 32.14 31.60 29.75 32.10 5.55 5.64 5.61 3.12 5.48 5.83 5.68 4.21 5.14 5.11 5.45 6.90 2.11 2.50 2.51 .40 2.86 3.15 3.13 1.18 3.47 2.74 2.75 3.90 1.20 1.20 1.32 1.32 1.32 1.32 1.32 1.32 1.32 1.32 1.32 1.36 3.75 3.15 4.07 2.95 2.94 2.74 3.09 3.76 3.90 4.40 3.95 4.10 10.68 11.84 12.90 12.39 14.12 10.24 11.42 10.82 12.50 13.94 19.80 21.45 1073.7 1075.8 1092.1 1308.4 1339.8 1352.4 1569.0 1596.0 1623.5 1624.2 1762.6 1700.0 13.0 14.8 14.9 91.1 15.0 18.5 17.0 47.0 15.2 15.1 1.08 1.12 1.11 5.82 9.1 1.09 1.11 3.15 9.5 .87 4.4% 3.2% 3.5% 3.6% 3.1% 2.3% 2.5% 2.4% 2.5% 3.2%										Revenues per sh ^A 34.90 "Cash Flow" per sh 9.40 Earnings per sh ^B 6.00 Div'ds Decl'd per sh ^C 1.48 Cap'l Spending per sh 4.10 Book Value per sh 33.55 Common Shs Outst'g ^D 1700.0 Avg Ann'l P/E Ratio 15.0 Relative P/E Ratio 1.05 Avg Ann'l Div'd Yield 1.6%									
CAPITAL STRUCTURE as of 6/30/98 Total Debt \$7096 mill. Due in 5 Yrs \$3155 mill. LT Debt \$6008 mill. LT Interest \$300.0 mill. (LT interest earned: 19.9%; total interest coverage: 16.1x) (20% of Cap'l)										35210 36112 37285 63089 64904 67156 75094 79609 52184 51319 52400 54550 22.9% 21.2% 22.0% 7.8% 15.1% 15.4% 16.1% 10.8% 22.1% 21.0% 23.0% 28.5% 3690.0 3366.0 3396.0 3568.0 3540.0 3626.0 4039.0 4845.0 2740.0 3827.0 4780 5100 2266.0 2697.0 2735.0 522.0 3807.0 4258.0 4879.0 1866.5 5608.0 4472.0 4855 6630 43.9% 32.4% 35.3% 40.9% 36.1% 36.5% 37.0% 46.2% 36.7% 37.8% 33.0% 38.0% 6.4% 7.5% 7.3% .8% 5.9% 8.3% 6.5% 2.3% 10.7% 8.7% 9.3% 12.2% 4377.0 3054.0 2687.0 3622.0 5128.0 4404.0 6681.0 137.0 1992.0 4763.0 4500 5000 8128.0 8144.0 9118.0 8484.0 8604.0 6812.0 11358 11635 7883.0 6826.0 3500 5750 11465 12738 14093 16228 18921 13850 17921 17274 20295 22647 34555 36475 13.2% 14.5% 13.4% 3.3% 15.1% 21.8% 17.9% 7.8% 20.4% 15.5% 13.0% 16.0% 19.8% 21.2% 19.4% 3.2% 20.1% 30.7% 27.2% 10.8% 27.6% 19.7% 14.0% 18.0% 8.5% 11.0% 9.5% NMF 10.9% 17.9% 16.8% NMF 17.2% 10.3% 7.5% 12.0% 57% 48% 51% NMF 46% 42% 38% 112% 38% 48% 48% 35%										Revenues (\$mill) ^A 59325 Operating Margin 38.5% Depreciation (\$mill) 5795 Net Profit (\$mill) 10200 Income Tax Rate 40.0% Net Profit Margin 17.2% Working Cap'l (\$mill) 6000 Long-Term Debt (\$mill) 11250 Shr. Equity (\$mill) 57045 Return on Total Cap'l 15.5% Return on Shr. Equity 18.0% Retained to Com Eq 13.5% All Div'ds to Net Prof 25%									
Leases, Uncapitalized Annual rentals \$652 mill. Pension Liability None Pfd Stock None Common Stock 1,806,338,000 shs. (80% of Cap'l) as of 7/31/98 MARKET CAP: \$104.8 billion (Large Cap)										BUSINESS: AT&T Corp. (formerly American Telephone and Telegraph), which resulted from a court-ordered breakup of the Bell System in 1984, received about 23% of the former company's assets. AT&T operates in the global telecommunications and information management industry. 1997 revenue breakdown: wireline, 88%; wireless, 8%; local service, products and other, 4%. Acquired										McCaw Cellular in '94, NCR Corp. in '91; LIN Broadcasting in '95. 1997 depreciation rate: 8.6%. Estimated plant age: 8 years. Has 133,000 employees, 3.5 mill. shareholders. Offs & Dirs own less than 1% of common. (5/98 Proxy). Chairman & C.E.O.: C.M. Armstrong. President: J.D. Zaglis. Incorporated: NY. Address: 32 Ave. of the Americas, NY, NY 10013-2412. Telephone: 212-387-5400.									
CURRENT POSITION ^E 1996 1997 6/30/98 (\$MILL.)										AT&T's pact with British Telecom (BT) should provide an edge in the international market. Last July, the two telecom giants announced an agreement, whereby they would create an independent business, offering international communications services. By 2000, management expects the 50/50 joint venture to produce \$10 billion in revenue and \$1 billion in operating income, adding \$0.05-\$0.10 to AT&T's share net. The companies' project that the venture will turn in annual top-line growth of 15% and 15%-20% advances at the operating line. AT&T will opt out of pacts with WorldPartners and Unisource in 2000. These alliances are losing money and have spotty track records in providing service. It's our view that the BT pact will yield better results, but competition from the likes of Global One and MCI WorldCom may prove management's growth targets optimistic. Assuming approvals from U.S. and European antitrust officials, by no means certain, the deal should be finalized by next July. The \$37 billion acquisition of Telecommunications, Inc. (TCI) offers expanded coverage of the U.S. market.										AT&T intends to close this transaction by mid-1999. The cable operator offers access to a sizable customer base and the ability to provide low-cost Internet and local phone services. The combined company will likely need to spend \$4 billion over four years to upgrade TCI's network to handle expanded services, which will be no easy task. Management will also need to negotiate alliances with other cable operators to better cover local markets. Though the distinctions between cable and telecom offerings are becoming less obvious, we believe that the acquisition will pass federal antitrust review.									
ANNUAL RATES of change (per sh)										AT&T shares are not ranked for Timeliness because of the pending TCI purchase. Management is making headway in cutting costs and we look for this to become more evident at the bottom line in the coming quarters; common stock buybacks will lend additional support. Good-quality AT&T stock offers worthwhile total returns to 2001-2003. Completion of the BT and TCI deals would likely allow AT&T to produce better 3- to 5-year returns than its industry peers.										David M. Reimer									
Past 10 Yrs. Past 5 Yrs. Est'd 1996 to '01-'03										1997 depreciation rate: 8.6%. Estimated plant age: 8 years. Has 133,000 employees, 3.5 mill. shareholders. Offs & Dirs own less than 1% of common. (5/98 Proxy). Chairman & C.E.O.: C.M. Armstrong. President: J.D. Zaglis. Incorporated: NY. Address: 32 Ave. of the Americas, NY, NY 10013-2412. Telephone: 212-387-5400.										October 9, 1998									
Revenues ^A 1.5% -3.0% 1.5%										1995 18262 19512 19704 22131 79609																			
"Cash Flow" 1.5% 5% 10.5%										1996 12850 12868 13228 13238 52184																			
Earnings 4.0% 5.0% 9.5%										1997 12662 12825 13004 12828 51319																			
Dividends 1.0% 2.0%										1998 12631 12858 13545 13366 52400																			
Book Value .5% -1.0% 18.0%										1999 13360 13600 13890 13700 54550																			
Cal-ender										QUARTERLY REVENUES (\$mill) ^A										Full Year									
Mar.31 Jun.30 Sep.30 Dec.31										Mar.31 Jun.30 Sep.30 Dec.31																			
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1999 13360 13600 13890 13700 54550										1999 .82 1.05 1.00 1.03 3.90																			
Cal-ender										EARNINGS PER SHARE ^A										Full Year									
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Cal-ender										QUARTERLY DIVIDENDS PAID ^A										Full Year									
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1998 .33 .33 .33 .33 1.32										1998 .33 .33 .33 .33 1.32																			

(A) Incl. access costs begin in '91; cell. ops. in '94. (B) Diluted eqs. Excl. unusual items: '91, d52.20; '93, d55.95; '94, d116; '95, d51.09; '96, d52; '98, 84¢. Incl. restrict. chg. in '95: \$1.48; '98, \$64. Next eqs. rpt. due mid-Oct. (C) Next div'd meet. Dec. 17. Goes ex Dec. 29. Div'd pmt. dates: 1st of Feb., May, Aug., and Nov. = Cap. Time. rank suspended due to breakup. (D) In mill. (E) Excl. Lucent, NCR, and AT&T Cap. after '95. (F) Restated for discont'd ops. (G) Price plot beyond 10/1/96 excl. Lucent, NCR, and AT&T Cap. Time. rank suspended due to breakup. © 1998, Value Line Publishing, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product.

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The Iridium and Globalstar satellites, dubbed "Big LEOS," are expected to provide wireless voice, data, messaging, and fax services to and from anywhere in the world at any time.

quarter of 1999, Globalstar L.P. is expected to have 48 LEOS plus eight spare satellites commercially operable.

The Iridium and Globalstar satellites, dubbed "Big LEOS," are expected to provide wireless voice, data, messaging, and fax services to and from anywhere in the world at any time. Both systems use digital technology. Both Iridium's and Globalstar's handheld phones will be multimode and will access the cellular telephone network. The Iridium business plan is focusing on professional business travelers and corporations for its customer base, while Globalstar is focusing on the worldwide population that lacks basic local telephone service. The Iridium and Globalstar products are expected to complement the existing wireless telephone market and are not considered head-to-head competitors.

In fact, these mobile satellite services companies are forming alliances with the existing wireless telephone carriers. The key factors that will determine the success of the LEOS market is the integration of the sophisticated LEOS technologies on a commercial basis and the market demand for such services.

DEREGULATION PROVIDES SOME OPPORTUNITIES

It has been more than two years since the Telecommunications Reform Act of 1996 was passed. Not one RBOC is in interLATA long-distance, nor are any of the large IXC's offering local exchange service to residential consumers. This was not the intent of Congress when it passed the Telecom Act. The beneficiaries of this legislation appear to be the horde of lawyers employed by the RBOCs and the IXC's. In addition, the business consumer has benefited from increased competition in the higher-margin business segment.

The obstacle to Congress' intent appears to be the FCC's implementation of the Telecom Act, that is, the 14-point checklist the RBOCs are required to meet before they can enter into the long-distance market. Three RBOCs, Ameritech Corp., SBC Communications Inc., and U S West Inc., have made Section 271 filings with the FCC. All three filings have been rejected by the FCC, stating that the RBOCs have not

sufficiently opened their markets to competition and their operating support systems are not compliant to handling the electronic processing of competitive local exchange company (CLEC) orders. Bowing to Congressional pressures, the FCC recently stated that its staff would assist the RBOCs with the Section 271 filings and provide some clarification on what specifically is required to enter the long-distance market. This change of position by the FCC will be proven in the Section 271 filing by Bell Atlantic for New York State.

In April 1998, the New York Public Service Commission (PSC) chairman announced his support of Bell Atlantic-New York's plans to further open local telephone markets to begin selling long-distance service in the state. The endorsement requires that Bell Atlantic meet a set of local competition conditions that include:

- Offering discount packages of recombined network elements to competitors wishing to provide basic local service and high-speed ISDN service to businesses or consumers. These packages will not be available in New York City, where competition is already intense; and
- Third-party testing of Bell Atlantic's electronic systems used by competing telephone companies to interface with Bell Atlantic systems.

The staff of the Department of Justice participated in this PSC filing process, providing input that should facilitate obtaining Dept. of Justice approval. Bell Atlantic is expected to present its Section 271 filing to the FCC in the fourth quarter of 1998. On securing FCC approval, the company is expected to offer long-distance services in parts of New York State by year-end. This decision by the FCC will be significant to both the RBOCs and the IXC's.

In the interim, two RBOCs—Ameritech and U S West—had been offering long-distance services to their local exchange customers by forming a marketing alliance with Qwest. Both RBOCs would receive a fee from Qwest for each customer that signs up for the long-distance service. However, a federal judge in Seattle granted a temporary restraining order blocking U S West from marketing Qwest's services until

STANDARD & POOR'S

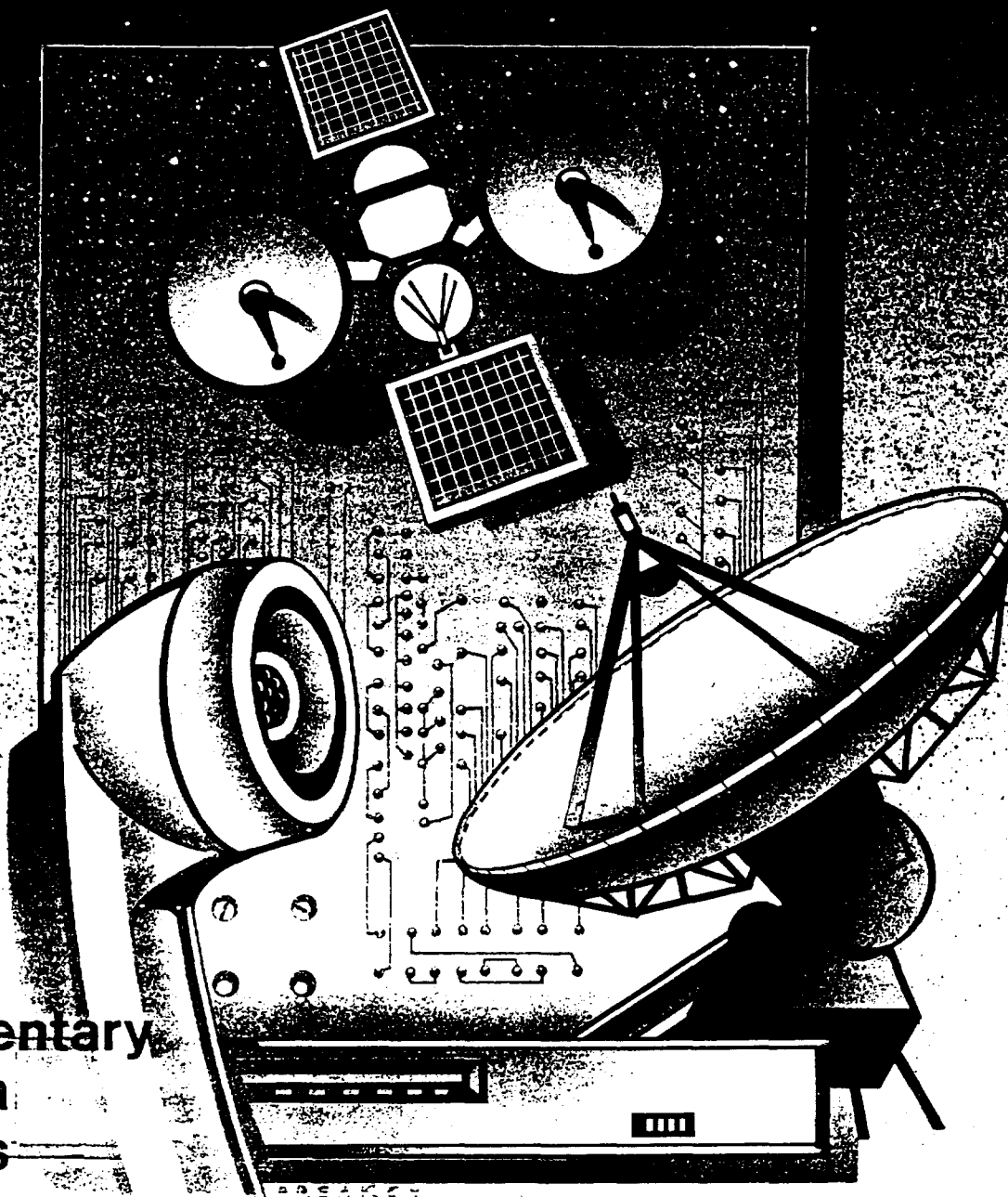
CREDITREVIEW

THE AUTHORITY ON CREDIT QUALITY

JUNE 24, 1991

Telecommunications

Commentary
Criteria
Ratings



system. Narrow Advanced Mobile Phone Service Standard (N-AMPS) is presently being tested in Las Vegas by Centel Corp. as a way to bridge the gap between present analog technology and digital. N-AMPS is designed to triple the number of voice channels available to customers while digital technology is in transition. The capital needs of this industry are not expected to decline over time. The need to introduce standardized digital technology that will better serve both the customer and the operator will require additional investment.

Digital technology. The Cellular Telephone Industry Association has chosen Time Division Multiple Access (TDMA) as the industry standard. However, various cellular operators are also testing the capabilities of Code Division Multiple Access (CDMA).

TDMA divides a 30 kilohertz (kHz) voice channel into three time slots of 10 kHz, each capable of handling one conversation. CDMA uses a spread-spectrum technique, in that the voice channel is modulated by a spreading code to form a digital signal. CDMA can offer 20 times the capacity of analog. These technologies are in the testing phase.

BUSINESS POSITION

S&P assesses five main components to determine a cellular telephone company's business position: cellular POPs; demographics; service revenue; penetration rates; and profit margin.

Cellular POPs. McCaw is the largest cellular telephone company in the U.S., with GTE Mobile Communications being the second-largest operator. Size in itself is advantageous in forming a seamless network. The key is to keep a customer on the system as he drives through various areas. S&P continues to see a consolidation within the cellular industry, with the larger telephone companies acquiring non-wireline franchises. Over 40% of non-wireline cellular systems are owned by wireline companies.

Demographics. In analyzing a cellular company, S&P looks at the size, demographics, and per-capita income in the service area. The type of businesses that predominate, commuting time, and the magnitude of roamer traffic are also considered (A roamer is a cellular customer of Company A driving through Company B's system). Geographic diversity minimizes the degree of vulnerability to economic conditions. However, a large number of dispersed cellular franchises in small MSAs may not fare as well as a few large MSAs in a condensed populated area with a good per-capita income. Markets with the fastest rate of cellular subscribers are located on the West Coast, the Southeast, and the Southwest, although the Northeast corridor linking Washington, D.C., New York, and Boston is very attractive in terms of airtime use and roamer traffic, as are parts of the Midwest. All of the Bell operating companies' cellular subsidiaries provide service to the top 30 MSAs, with RSA markets consisting of highways linking their MSAs.

Service revenue. Monthly service revenue per subscriber has been declining year-to-year, as the more casual customer subscribes to the cellular system. Average monthly revenue per subscriber is around \$85, with a few cellular companies still in the \$100 per subscriber range. These operators have a larger number of business customers and/or congested highways. The companies have introduced enhanced services to stimulate telephone use. The cost of adding a new subscriber remains high for the industry, as does the customer churn rate.

Penetration rate. While some industry observers project 15% penetration by the year 2000, the current industry average penetration is around 2%. Penetrations for the rated companies range from 0.6%–2.4%. Since customer penetration is linked to the demographics of a market, those cellular companies with ownership in the top 30 MSAs enjoy above-average penetration rates.

Profit margins. Operating profit margin is measured by dividing operating income by total revenues. Profit margins vary greatly within the cellular telephone industry from a negative 15% to a positive 46%. On average, profit margins remain low, because of the capital-intensive nature of an industry. In the rating process, S&P would view a profit margin of above 10% to be an average target at this time.

MEASURES OF FINANCIAL RISK

Although McCaw Cellular Communications Inc. is the only pure rated cellular company, S&P factors a diversified telecommunications company's cellular exposure into the rating process. Given the developmental nature of this industry, the following key financial ratios are of limited use in determining a rating evaluation.

Earnings protection. Income before interest and taxes divided by interest costs calculates the cellular segment's pretax interest coverage for those companies with profitable cellular operations.

Cash flow/interest. S&P uses cellular cash flow after marketing costs and before depreciation relative to interest costs. This measures the company's minimum ability to meet interest costs using available cash.

Cash flow/total debt. This ratio is used to determine the cellular debt capacity and give an indication of its refinancing capability.

Debt per POP. This measures the debt obligations associated to cellular operations in relation to its total POPs. Cellular properties continue to be sold or traded. Therefore, S&P can generally estimate the asset value of a particular market. The market value per POP ratio indicates some measure of refinancing capability.

Rosemary Avellis-Abrams
(212) 208-1750

COMPETITIVE FORCES PRESSURE TELEPHONE RATINGS

Before American Telephone & Telegraph Co.'s divestiture of local telephone companies, regulation was the industry's major business risk. Local exchange telephone companies were uncertain about whether state and federal regulators, with their mandate to ensure fair and reasonable rates, would grant them sufficient revenues to recover their costs. Today, the inexorable advance of competition most threatens future support for credit quality. The industry's relentlessly growing exposure to competition will occur with or without recognition or admission by managers and regulators. Greater competition is driven by technology, which has never had any regard for regulation, only the economics of the situation. The regulated local telephone companies, with prices averaged to fulfill social goals, are a prime target of this kind of competition.

Substantial revenues are derived from increasingly competitive services, such as interstate long distance and toll service. Local networks price these competitive services to subsidize local service, which is offered below cost. Users of such services have an economic incentive to bypass the local network and avoid subsidizing other customer classes. To retain price-sensitive traffic, rates may need to be rebalanced. As competition replaces regulation, subsidies from the more competitive niches will be eliminated, and local exchange telephone companies will demonstrate higher risk profiles similar to those found in the industrial ratings universe. Longer term, the cost/price relationship will become a key issue in determining ratings.

To date, overall business risk for local telephone companies has been perceived to be quite low compared to that of most

(continued on next page)

With the aid of federal legislation to deregulate the telecommunications industry, competition will intensify in all facets of the telecom arena over the next several years. Even cable companies will probably enter the fray.

Many of the current players, particularly the Baby Bells, will be forced to adapt to a more competitive environment and pursue new business ventures for growth.

Improving technology and the emergence of the Internet promises to further change the landscape of the telecom sector. Meanwhile, a more broad-based introduction of Personal Communication Services (PCS) wireless phones may well lead to lower prices and a new wave of subscriber growth.

The most successful companies will probably be those that offer good technology and best market their services most effectively to the broadest audience.

A Changing Environment

The telecommunications market is undergoing fundamental change in several major facets: federal deregulation, the emergence of the Internet, and the widespread introduction of PCS. The latter two are discussed in more detail below.

In early February, the Federal Government passed a sweeping telecommunication reform bill that clouds the distinction between local and long distance telephone providers. The new law opens the local telephony market to competition, allows the Baby Bells to offer long distance service, and deregulates the cable industry. It effectively overturned the Modified Final Judgment (MFJ), which split AT&T into the seven regional bell holding companies (Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, SBC, and U.S. West) and AT&T.

There are several guidelines of the legislation. For starters, until local competition exists, the Bells can only offer long distance services outside their local region. Since most of the Bells' names are only well known within their territories, most companies plan to offer only in-region long distance service. (That market includes all calls that originate within the local area.) However, before the Bells can offer in-region service, they must meet an extensive checklist to ensure that local competition actually exists. The FCC has a major role in promulgating the rules, including determining "fair" interconnection rates. Interconnection allows

INDUSTRY TIMELINESS: 46 (of 96)

other players to purchase local access at wholesale rates and interconnect their networks. Wholesale rates are equal to the retail rates minus avoidable costs (i.e. advertising).

There is bound to be a plethora of lawsuits disputing what the "fair" interconnection rates should be. However, we suspect most of the Bells will be allowed to offer in-region long distance while the suits are pending. If that turns out to be the case, many Bells will probably begin offering in-region long distance service in 1997. However, the time frame may be delayed to 2000 if the Bells are blocked by an injunction until the lawsuits are resolved.

Circuit Versus Packet Switching: Wired communications has improved substantially since the days of the telegraph, allowing for telephone call charges to fall substantially (adjusted for inflation) over the past 20 years. Even so, the current network largely depends on 70-year-old antiquated circuit switching. Newer packet switching technology, which is used by the Internet, is much more efficient.

Traditional phone calls utilize circuit switching, meaning that one path, or circuit, is dedicated to each conversation. Packet switching, on the other hand, breaks each transmission into packets that are sent over various paths on the network. The key difference is that each transmission may travel along different paths before arriving at the same destination. Switches read the "address" of each packet and send it in the "right" direction. The packets are then reassembled in the correct order at the receiver's location. To illustrate the process, consider a three-page document that is being sent by overnight mail. Using circuit switching, the package would be sent via one carrier, such as UPS. Using packet switching, however, the parcel would be sent using three different carriers—one page via UPS, DHL, and FedEx, respectively. The reason packet switching is cheaper is because it sends information over unused portions (like pauses in conversations) of the network, making for much greater efficiency.

Over traditional copper networks, packet switching does not work very well with voice. High-speed fiber optic networks appear to do much better. The reason that voice does not work as well as data on a packet switching system is that the information that is transmitted along the network does not arrive at

Composite Statistics: Telecommunications Services Industry

*Includes AIT, BEL, BLS, GTE, NYN, PAC, SBC, USW

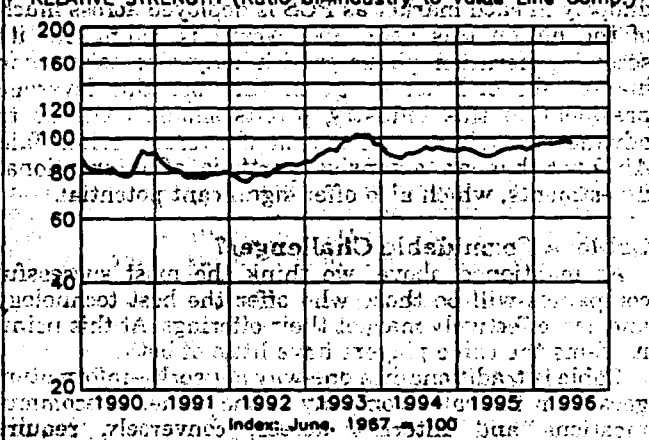
1992	1993	1994	1995	1996	1997	99-01
92091	93671	106486	109303	114700	119500	Revenues (\$mil)
9928.5	10642	12778	13782	14970	15950	Net Profit (\$mil)
33.2%	31.7%	35.6%	36.2%	36.0%	36.0%	Income Tax Rate
10.8%	11.4%	12.0%	12.6%	13.0%	13.3%	Net Profit Margin
43.4%	43.4%	45.7%	51.5%	44.5%	43.5%	Long-Term Debt Ratio
55.5%	55.4%	52.8%	45.5%	55.5%	56.5%	Common Equity Ratio
118722	113451	117964	110726	114650	120000	Total Capital (\$mil)
145967	145107	151978	127865	131500	145000	Net Plant (\$mil)
10.3%	11.2%	12.7%	14.7%	14.0%	13.5%	% Earned Total Cap'l
15.0%	16.9%	20.5%	27.3%	25.0%	20.0%	% Earned Net Worth
15.0%	16.9%	20.5%	27.3%	25.0%	20.0%	% Earned Com Equity
4.3%	4.7%	6.2%	9.1%	5.0%	6.0%	% Retained to Com Eq
72%	72%	70%	67%	69%	65%	% All Div'ds to Net Prof
14.7	16.2	12.4	14.2			Avg Ann'l P/E Ratio
.89	.96	.81	.95			Relative P/E Ratio
4.9%	4.5%	5.6%	4.7%			Avg Ann'l Div'd Yield

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Telecommunications Services

RELATIVE STRENGTH (Ratio of Industry to Value Line Comp.)



BACK TO
RESULTS

NEW SEARCH

A connected world

INDEX TERMS Surveys|telecommunications; Telecommunications|survey; Cairncross, Frances|telecommunications, survey;
Telecommunications|virtual office, contributions to; Offices|virtual office, emergence and growth, telecoms' role;
DATE 13-Sep-97
WORDS 1534

A connected world The telecommunications revolution, driven by liberalisation and the Internet, will change the way people live and work, writes Frances Cairncross IN ANDERSEN CONSULTING'S smart new offices in Wellesley, just outside Boston, Mark Greenberg is entitled as a senior partner to three filing-cabinet drawers of storage space. In one, he keeps a bubble-wrapped package, containing the sort of personal mementoes—family photographs, shields and so on—with which businessmen like to decorate their offices, together with a diagram to show how they should be arranged. On the rare days when Mr Greenberg is not visiting a client or jetting around the world, he reserves an office. When he arrives, his treasures are neatly laid out on the desk for him to make him feel at home.

But this is, in effect, a virtual private office, his just for the day. Struck by the waste involved in maintaining expensive permanent offices for people with itinerant lives, the partners in the world's largest management consultancy have created something that feels like a cross between a hotel and a luxurious club. The Wellesley office is staffed by the cream of Boston's hotels: people who understand the business of providing services for important and self-important people. The reception desk looks like a hotel foyer; each floor has lots of little "huddle rooms" with comfortable armchairs, as well as brainstorming rooms with less comfortable ones; and there are open spaces for coffee and conversation with colleagues.

Love it or loathe it, this office of the future is made possible principally by the revolution tearing through telecommunications. Before the move from its old Boston offices, the company threw out 120 tonnes of papers. So where, you ask another senior partner, does he file his papers? He taps his laptop. "That's my filing cabinet." Some of the savings on offices have been invested in building what is grandly called the "Knowledge Exchange": a vast on-line database containing the company's accumulated wisdom, available to Andersen people anywhere in the world seven days a week (provided, of course, they can get their laptops to connect). The benefits, partners claim, are not merely the more efficient use of property, but easier and speedier access to information for everyone. The result is "better, faster, cheaper"—the battle-cry of the communications revolution.

Plenty of other companies will, in the next decade, undergo similar upheavals, fired by a change even more far-reaching than the harnessing of electrical power a century ago. The transformation of telecommunications networks, brought about mainly by a marriage with computers, is simultaneously driving down the cost of communicating and driving up the amount of information that can be exchanged. Where once people had to go to a particular place—a telephone box, a computer—to communicate, now communications come to them, in the form of a pager, a mobile telephone, or a laptop with a phone jack. And where once greater distance made communications progressively more expensive and complicated, now distance is increasingly irrelevant.

But it is not yet obvious where all this will lead. For about a century after its birth, the telephone network became more and more extensive, but not much more sophisticated. Only in the past two decades have three great innovations—the fax, the mobile telephone and the Internet—shown how the network can be used to create new mass-market products that change the way people live and work. Many more such novelties probably lie ahead, for telecommunications is at the centre of the

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most intense innovation that any industry has ever seen.

The innovations themselves are only a first step. Beyond that lies the evolution of ways to use them, a much more gradual and unpredictable process. Think of the myriad ways electrical power has shaped the 20th century. The impact of the communications revolution on life in the next century will be just as pervasive.

All things change

One of the few certainties of this new world is that it will change the communications business itself beyond recognition. Indeed, this has already begun to happen, impelled by the combination of liberalisation and technological innovation. So far the pace of change has been uneven: in some respects, bewilderingly fast; in others, infuriatingly slow.

In many countries, the fixed telephone service is still a public-sector monopoly. By this time next year, the monopolies will, in theory, have been swept away in most countries, as agreed earlier this year in the World Trade Organisation. Its timetable for opening markets at the start of next year parallels an earlier agreement by the countries of the European Union to create a single market for telecommunications services.

But experience in those countries that have already begun to dismantle their monopolies—including the United States, Japan, Britain, Australia, New Zealand and Scandinavia—shows how hard it is to create competition in telephone networks. The old telephone monopolies will almost certainly still be powerful companies ten years from now—though in 20 years' time some of them may be gone.

Long before then, the industry will have become much more like other industries. New companies are already elbowing into the business. Some come from other industries; some are cheeky upstarts, founded by youngsters. Eli Noam, an economics professor at Columbia University in New York who is also a telecommunications guru, speaks with wonder of one of his graduate students who started a company to resell telephone capacity, and now has 100,000 customers. "The amount of young people going into competition against big companies is remarkable," he says. "They are not afraid. The advantage of 25 years of experience is irrelevant in such a high-growth industry."

Already, telecommunications services are starting to be internationally traded—and occasionally dumped, giving rise to a novel sort of trade war. And—another novelty—some telephone companies will go bust (as one or two tiddlers have already done). Many will have foreign owners. No longer will all big telephone companies do more or less the same things; instead, like car companies or banks, they will specialise and diversify, sometimes wisely, sometimes not. And, once there are many providers of communications, government's role will shrink.

Although regulatory change may be slow, the speed of technical transformation is breathtaking, as information is increasingly handled in digital form and as the capacity of networks soars. As a result, activities that were strictly for nerds one year (say, voice telephone calls over the Internet) are hot commercial prospects 12 months later; and technologies that started as a businessman's luxury (say, cellular telephones) quickly become a mass-market gadget. No wonder Andrew Entwistle of Analysys, a consultancy in Cambridge, England, confesses: "We've gone from clarity about the future to explaining why we can't answer with certainty."

Wireless and data sum up the two main uncertainties. Ten years from now, it seems probable that wireless will have become the main conduit for voice conversations, as people come to think of the telephone as a personal, portable gadget rather than a static object which they share with others in a fixed place. Moreover, wireless, including satellite telephony, will eventually be the main guarantee that everybody has a choice of telephone service.

Talking technology

At the same time, telecommunications will be increasingly about carrying data. Some of that data will be the human voice, carried in new ways. Some will be moving pictures, converted into digital form, and some will be information sent from one machine to another. Whereas even the most loquacious humans eventually dry up, machines can go on communicating for ever. Carrying voice calls will remain the industry's biggest money-spinner for many years—in the time it has taken Internet telephony to become a \$2m business, international telephone sex chat has become a \$2 billion business. But data will be what fills the pipes.

These changes will transform the industry. "The Internet is just as significant for the telecoms industry as the PC was for the computer business," says Tim Kelly, head of operations analysis for the International Telecommunication Union (ITU), an intergovernmental body in Geneva. "It brings new companies and cuts margins." But, he adds, the telephone companies are more entrenched than the mainframe computer makers ever were: they have run a highly effective cartel, they are closely bound to governments, and they usually control the final gate between the network and the user. For all these reasons, change may take longer to come about.

This survey will review the changes that have already taken place, and preview the bigger ones waiting in the wings: in competition and regulation, and in the technologies developing at such a breakneck pace. It will end by giving a few tentative answers to the biggest question of all: how will all this change our lives? A decade or two down the road, will we bless the telecommunications revolution—or wish that it had never happened?

An earlier survey by the same author, "The Death of Distance", was published on September 30th 1995 and is available on this site. To find it, go to the [archive](#) and search for "Frances Cairncross". Both surveys form the basis for a book, also called "The Death of Distance", to be published in November. If you would like information about pre-ordering this book, please e-mail shop@economist.com. See also www.deathofdistance.com

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ZOOMING DOWN THE I-WAY

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ZOOMING DOWN THE I-WAY

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Business Week: April 7, 1997

Department: Special Report

Headline: ZOOMING DOWN THE I-WAY

Deck: Alternative carriers and nimble startups have united PCs, E- mail, fax, and video

Byline: By Andy Reinhardt in San Francisco, with Peter Elstrom in Chicago, Paul Judge in Boston, and bureau reports

Remember all that talk a few years ago about the Information Superhighway? Offices and homes across the country were supposed to be transformed by powerful new communications technologies that would deliver two- way video, online games, home shopping, even the choice of working from the beaches or the ski slopes--all conducted via snazzy new digital devices. Instead, after a few limited experiments by Time Warner Cable, U S West, and Bell Atlantic, the telephone and entertainment companies decided that these high-tech roadways were just too expensive to build--and a hard sell to their cost-conscious consumers.

Even the Telecommunications Reform Act of 1996, meant to remove many of the regulatory barriers that made it tough for telecom companies to invest in the I-way, has made little difference. Fourteen months after President Clinton signed the law, the nation's phone and cable- TV companies are still fighting yesterday's battles, bent on invading each other's turf by leasing and reselling existing local and long- distance service.

But outside the boardrooms of telecom's giants, innovation is sweeping the wired and wireless world--bubbling up from the bottom. Hundreds of alternative carriers and nimble startups are leaping head-first into the newly deregulated environment. Pioneers such as Wildfire Communications, Lucent Technologies, Dialogic, and VDOnet are the new names to watch.

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Today, most Net phone callers are PC hobbyists. For everyone else, the quality of these calls is usually too inferior to the public phone network. But that could soon change. VocalTec Ltd. in Northvale, N.J., the leading maker of Internet telephony